Appendix A: Copies of CEMS Root Cause Failure Analysis and Corrective Actions Plans

There were no CEMS Root Cause Failure Analysis and Corrective Actions Plans (RCA & CAP) completed during the reporting period for CEMS that are not in continuous operation for at least 95 percent of the total operating time of the process unit(s) being monitored for each of two consecutive calendar quarters.

Appendix B: LDAR Valve or Valve Packing Not Commercially Available Report

During this reporting period, there were no valves purchased for which a claim that a low leak valve or valve packing was not commercially available.

Appendix C: QQQ Compliance Schedule Beyond Two Years Report

Evaluations are complete and a plan to upgrade the QQQ components has been developed. If upgrades to the QQQ components extends beyond two years or if an update to the QQQ Audit Report is required to extend actions beyond two years, a progress report will be completed every two years as part of this semi-annual report in Appendix C.

Appendix D: Reports Submitted Only to Ohio in Compliance with this Consent Decree

The following table lists all reports that pertain to compliance with Consent Decree. Copies of any reports that were submitted only to Ohio and that pertain to compliance with this Consent Decree are listed in the following table and copies are attached.

Table D.1: Copies of Reports Submitted to Ohio EPA Only

Report Name	Submittal date
1 Quarter 2021 Title V Quarterly Deviation Report	4/30/2021
2 Quarter 2021 Title V Quarterly Deviation Report	7/30/2021
2021 Title V Annual Certification Report	4/29/2021

01-May-21

City of Toledo Division of Environmental Services 348 S. Erie Street Toledo, OH 43604





Des Gillen President BP-Husky Refining LLC 4001 Cedar Point Road Oregon, OH 43616 P 567.698.4529 des.gillen@bp.com

RE: Title V Quarterly Deviation Report – 1st Quarter 2021

Dear Peter:

Attn.: Peter Park

Attached is the quarterly Title V deviation report for the BP-Husky Refinery. The Title V Permit (P0104782) requires reports to be submitted quarterly outlining known deviations of emission limitations, operational restrictions, or control device operating parameter limitations. The permit also requires semi-annual reports outlining deviations of requirements in the permit, principally the monitoring, recordkeeping, and reporting (MRR) requirements. The permittee chooses to report known MRR semi-annual deviations identified during the quarter in its quarterly deviation report so are included in the attached report.

In order to consolidate reports, this letter and its attachments also constitute the deviation reports for all the Permits to Install (PTIs) that have been incorporated into the Title V Permit and which have PTI requirements for deviation reporting. All known deviations of the Title V Permit and currently effective PTIs are presented in the attached quarterly deviation report. Also, the following provides some additional background on a few of the issues relevant to this report.

10 Year Tank Inspections for Group 1 Subpart CC EFR Tanks

In early 2021, BP-Husky completed an internal audit of its requirements that became applicable due to the revisions to 40 CFR 63 Subparts CC and UUU (Refinery MACT I and II) as part of EPA's Petroleum Refinery Sector Risk and Technology Review Rule (RSR). During this audit, it was discovered that fourteen (14) external floating roof (EFR) tanks subject to the 40 CFR 63 Subpart CC requirements for Group 1 storage tanks did not comply with all of the inspection requirements of 40 CFR 63 Subpart WW, which is referenced in 40 CFR 63.646 of Subpart CC. The regulatory citation for the missed inspection requirements is:

[40 CFR 63.1063(c)(2)(iii)] EFRs shall be inspected each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the EFR shall be inspected as specified in 63.1063(d)(1).

Title V Quarterly Deviation Report – 1st Quarter 2021

Specifically - 40 CFR 63.1063(d)(1)(iii) requires that the permittee inspect ... Floating roof deck, deck fittings, or rim seals that are not functioning as designed (as specified in paragraph (a) of this section

The 14 Group 1 EFR tanks that did not comply with these requirements are included in Table 1 below. These deviations occurred because all the EFR tank requirements had not been incorporated into the refinery's compliance tasking system. BPH had been conducting and completing the required 5-year inspections for these EFR tanks. Inadvertently, BPH did not realize that the 10-year inspection requirements were different from the 5-year inspection requirements and that additional inspections of the tank deck fittings or rim seals were required. When the deficiency was discovered, BPH scheduled and completed all the required inspections by the end of the first quarter in 2021. No further deviations were found identified during the inspections. Table 1 below lists the affected tanks and the dates by which the inspections were required and when they were completed. Deviations from these requirements have not been previously reported in the quarterly Title V Deviation reports that were submitted for 2020. The Title V citations for these deviations are identified in the Part B deviations in Attachment B.

Table 1
Group 1 Subpart CC EFR Tanks Not Inspected within 10-years

OEPA ID	Tank #	Last Empty Tank Inspection	10 year inspection due	Date 10 year inspection Completed
T029	99	10/7/2004	10/7/2014	2/9/2021
T020	647	3/15/2005	3/15/2015	2/15/2021
T097	270	9/20/2007	9/20/2017	2/2/2021
T030	813	11/12/2007	11/12/2017	2/15/2021
T036	123	7/7/2008	7/7/2018	2/3/2021
T033	816	11/19/2008	11/19/2018	3/4/2021
T027	186	5/28/2009	5/28/2019	2/9/2021
T038	120	6/18/2009	6/18/2019	2/11/2021
T120	132	7/22/2009	7/22/2019	3/26/2021
T034	817	4/1/2010	4/1/2020	3/2/2021
T039	121	5/5/2010	5/5/2020	2/10/2021
T028	189	5/19/2010	5/19/2020	2/10/2021
T060	65	5/24/2010	5/24/2020	3/18/2021
T031	814	9/9/2010	9/9/2020	2/19/2021

Title V Quarterly Deviation Report – 1st Quarter 2021

B036 Reformer 3 Furnace CEMS Downtime >5%

On March 30, 2021 it was discovered that there was a torn diaphragm on the Reformer 3 sample pump. This small tear diluted the sample going to the O2 and NOx analyzers with ambient air. It was determined that the diaphragm had been leaking since March 24, 2021 and contributed to the REF3 CEMs being down greater than 5% of the quarter.

This report and cover letter were prepared in accordance with a system designed to assure that qualified personnel evaluated all reasonably available information relevant to compliance with the terms and conditions of the Title V Permit over the period covered by the report and that they then reported to me their conclusions with respect to compliance. Based on my inquiry of those persons, I believe the contents of the enclosed report and this cover letter to be true, accurate, and complete. However, the certification of this report and cover letter should not be interpreted to imply that I have personally reviewed all documents, data, or other information underlying the compliance determination. Nor should it be read to imply that the persons responsible for gathering and evaluating the information relied on in preparing this report and cover letter have reviewed all information generated by operations at the facility. As with any regulatory program, it is possible that there were deviations from permit conditions which may not be identified in the normal course of a good faith effort to implement the required compliance efforts under these programs.

In addition, the certification of this report and cover letter should not be construed as containing any admissions that the reported deviations or other events are violations of any applicable requirement. In some cases, applicable rules contain various defenses and/or exemptions which may excuse particular deviations. In other cases, the question of whether a particular event constituted a deviation or violation may be subject to interpretational disputes. In still other cases, events may be reported as deviations out of an abundance of caution despite the fact there is insufficient information to determine whether the deviation actually occurred.

If you have any questions concerning this report, please contact Ashley Zapp (ashley.zapp@bp.com or 567-698-4410).

Sincerely,

Des Gillen
90F20640AD13450...

Des Gillen

President - BP-Husky Refining LLC

Attachment – 1Q2021 Title V Deviation Report

Ohio Environmental Protection Agency		
Deviation Reporting Form		
FACILITY NAME	BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)	04-48-02-0007	
FACILITY ADDRESS	4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date	P0104782 - Renewal effective 08/03/17 (issued 07/13/17)	(3/17)
QUARTERLY Reporting Period	SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	/A" below in the "From" and "To" ation reporting)
From: 01/01/2021 To: 03/31/2021	From: 01/01/2021	To: 03/31/2021
Total pages in report, including this one (signature page and sections I, II, and III)	20	
Please list any supporting attachments	None	
Reporting deadline	04/30/2021	

NOTE: The deviation reporting period shall be stated in the following format: "xx/xx/xx through zz/zz/zz" where xx/xx/xx and zz/zz/zz are the beginning and end dates for the deviation reporting period respectively.

SIGNATURE FOR STATEMENT
This statement shall be signed by the responsible official as defined in OAC rule 3745-77-01(GG). Making of any false material statement, representation or certification constitutes a violation of ORC 3704.05(H), and subjects the responsible party signing this statement to civil and/or criminal penalties as provided in ORC 3704.06(C) and ORC 3704.

CERTIFICATION

Based on information and belief formed after reasonable inquiry, I hereby affirm, as stated in OAC rule 3745-77-03(D), that the statements and information as transmitted in this Title V report are true, accurate and complete to the best of my knowledge. -DocuSigned by:

Ohio Envi	Ohio Environmental Protection Agency	tection Ager	ncy					
Deviation	Deviation Reporting							
FACILITY NAME	NAME					BP-Husky Refining LLC		
FACILITY	FACILITY ID (PREMISE NUMBER)	NUMBER)				04-48-02-0007		
FACILITY	FACILITY ADDRESS					4001 Cedar Point Road, Oregon, OH 43616	NH 43616	
Issuance	Issuance or most recent modification date	modificatio	n date			P0104782 - Renewal effective 08/03/17 (issued 07/13/17)	3/17 (issued 07/13/17)	
QUARTE	QUARTERLY Reporting Period	Period				SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	Mease indicate "N/A" below in semiannial deviation reporting	the "From" and "To"
From: 01/01/2021	01/2021		To: 03/31/2021	021		From: 01/01/2021	To: 03/31/2021	6.
Reporting Deadline	Deadline		_			04/30/2021		
(PART A) - General Terms and Conditions (Permit Requi	Ferms and Co	nditions (P	ermit Requirement F	rement Reporting) (Table 1))le 1)			
Mark the following box	x with an X' if	no General	Mark the following box with an 'X' if no General Terms and Conditions deviations occurred	s deviations ocu	curred			
X THERE W	/ERE NO DEV	IATIONS O	F ANY OF THE TERM	MS AND COND	ITIONS OF PA	THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART A OF THE TITLE V PERMIT DURING THE REPORTING PERIOD	URING THE REPORTING PE	RIOD
Add rows as necessal	ry to the follow	ing table for	reported deviations (one for each G	eneral Term a	Add rows as necessary to the following table for reported deviations (one for each General Term as applicable; see detailed instructions for more information) (Table 2)	ns for more information) (Tabl	e 2)
TITLE V PERMIT TERM NO.	Reporting Requirer (Choose one)	equirement e one)	Reporting Requirement ACTUAL METHOD (Choose one) USED TO DETERMINE		DE	DEVIATION INFORMATION	PROBABLE CAUSE FOR CORRECTIVE ACTIONS / THE DEVIATION PREVENTATIVE MAGACI IDES TAKEN	CORRECTIVE ACTIONS / PREVENTATIVE
Total Deso								
	Quarterly	Semi-	COMPLIANCE	DEVIATION	DEVIATION DURATION	DESCRIPTION AND		
		Annual		DATE / TIME DATE / TIME START END	DATE / TIME END	MAGNITUDE OF THE DEVIATION		

Ohio Environmental Protection Agency Deviation Reporting	gency		
FACILITY NAME		BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)		04-48-02-0007	
FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	43616
Issuance or most recent modification date	date	P0104782 - Renewal effective 08/03/17 (issued 07/13/17)	17 (issued 07/13/17)
QUARTERLY Reporting Period		SEMIANNUAL Reporting Period (please indicate "N/A" below in the fields if this report does not include semiannual deviation reporting)	SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)
From: 01/01/2021	To: 03/31/2021	From: 01/01/2021	To: 03/31/2021
Reporting Deadline		04/30/2021	

(Part B) - Facility-wide Permit Requirement Reporting

Insignificant Emissions Unit Negative Declarations (Table 1)

List each insignificant emissions unit where no deviations of any PTI terms or applicable requirements for the listed emissions unit occurred, or add rows as necessary to the deviation reporting table (see next page) for reported deviations (one for each term as applicable; see detailed instructions for more information) THERE WERE NO DEVIATIONS OF ANY PTI TERMS OR APPLICABLE REQUIREMENTS FOR THE FOLLOWING LISTED INSIGNIFICANT EMISSIONS UNITS IDENTIFIED IN (PART B.28) OF THE TITLE V PERMIT:

F002, G001, J008, J009, J011, L001, P030, P034, P038, P046, P047, P052, P061, P062, P064, P065, P066, P067, P068, P802, T042, T043, T048, T095, T112, T117, T117, T141, T145, T148, T149, T151, T159, T168, T168, T169, T172, T173, T191, T196, T197, TMP 196253

T121, List of all insignificant units for review and ease of putting into the above table

F002, G001, J008, J009, J011, L001, P030, P034, P038, P046, P047, P052, P061, P065, P065, P066, P067, P068, P802, T042, T043, T048, T108, T112, T117, T141, T145, T148, T149, T151, T159, T163, T168, T168, T172, T173, T191, T196, T197, TMP 196253

FACILITY NAME						BP-Husky Refining LLC					
FACILITY ID (PREMISE NUMBER)	UMBER)					04-48-02-0007					
FACILITY ADDRESS Issuance or most recent modification date	odification date					4001 Cedar Point Road, Oregon, OH 43616 P0104782 - Renewal effective 08/03/17 (iss	4001 Cedar Point Road, Oregon, OH 43616 P0104782 - Renewal effective 08/03/17 (issued 07/13/17)				
QUARTERLY Reporting Period	eriod					SEMIANNUAL Reportin	SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include	below in the "From" and "To	" fields if this report do	ses not include	
From: 01/01/2021		Tc	To: 03/31/2021		_	From: 01/01/2021		To: 03/31/2021			
Reporting Deadline						04/30/2021					
Facility-wide Permit Requirements Terms and Conditions (Permit Requirement THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDI	Terms and Con	ditions (Permit			Negative D	eclarations (mark with	Reporting) - Negative Declarations (mark with an 'X' if applicable) (Table 2). THONS OF PART R OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT	SIOD SPECIFIED IN THIS RE	FPORT		
Part R Facility-wide and/or IE1 nermit requirement (Permit Requirement Renortino) - Deviation Renortino (Table 3)	rmit requiremen	of The Length	rement Repo	irtina) - Devi	ation Report	ing (Table 3)					
Add rows as necessary to the following table for reported deviations (one for each Term as applicable, see detailed instructions for more information)	ing table for repor	rted deviations (c	ne for each	erm as appl	cable; see de	tailed instructions for n	nore information)				
		ACTUAL METHOD USED		DEV	DEVIATION INFORMATION	DRMATION					
TITLE V PERMIT or IEU PERMIT TERM NO./Description or PTI terms for IEUs	Quarterly	Semi- TO Annual DETERMINE COMPLIANCE		DEWATION DURATION DATE / TIME DATE / TIME START END	JRATION TE / TIME END	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - If Yes, continue to the next	MALFUNCTION VERBAL REPORT(S) DATE(S) (if no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)
Part B.7the permittee shall at all times comply with the effective rules and complance dates as established by approved extensions, litigation, EPA definications, or rule changes as published even if the requirements reflected in the language of this permit are different. [Also reported in Part C - tbl 2]		Continuous X Parameter Monitoring System (CPMSs)		1/31/2020	3/31/2021	BPH has identified monitoring instrumentation in the hydrocarbon flare was system that does not meet all of the requirement of 40 CFR 63.671 of Subpart CC.	The refinery sector rule updated 40 CFR 63 Subpart Uc requirements in 2015 to include new flare instrumentation requirements. BPH immediately began implementing their plan to come in to compliance and as they have operated, additional flare instrumentation has been instrumentation has been identified that does not meet the MACT CC - Table 13 requirements.	This deviation was first identified in 102020 for two flare gast flow meters. A capital project is planned to update these flow meters and bring them into compliance. BPH is still finalizing the schedule for these repairs. After the flow meters were identified, BPH began an on-going investigation to identified, BPH began an on-going investigation to identify all of the misturementation deficiencies pursuant to identify all of the meters to determine if pressure and temperature sensors on the flow meters on the flow meters on the flow integrates are additional upgrades to be made. This issue is ongoing and BPH will report the date of the final updates when it its available.	e e	No Report	No Report

term of some seesant to the following table for reported deviations (one for each Term as applicable; see detailed instruc-	no table for	reported de	rmit Kequirement	Keporting) - v	eviation Kept	rting) - Deviation Reporting (Table 3) ern as applicable: see detailed instructions for more information)	ore information)				
	9		ACTUAL METHOD USED	Ō	DEVIATION INFORMATION	FORMATION					
TITLE V PERMIT or IEU PERMIT TERM NO./Description or PTI terms for IEUs	Quarterly	Semi- Annual	TO DETERMINE COMPLIANCE		DEVIATION DURATION DATE / TIME DATE / TIME START END	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION ? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT(S) DATE(S) (In or points were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT(\$) DATE(\$) (if no reports were made, state "NO REPORTS" in the space below)
Part B.4.a)(13)(e) 40 CFR 60.105(a)(4)(iii); and Part B.5.a)(6)f, [40 CFR 60.105(a)(2)). The permittee shall conduct performance evaluations for each H2S monitor according to the requirements of 40 CFR 60.13(c) and Performance Specification 7 of appendix B to part 60 [40 CFR 60.13(c)] Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the continuous emission monitoring system (CEMs) during any performance test required under \$60.8. The owner or operator of an affected facility shall provide the Administrator at least 30 days prior ondice of any performance stest, except as specified under other except as specified under other subparts, to afford the Administrator the opportunity to have an observer present		×	Reporting	2/8/2021	2/21/2021	The Intent to Test (ITT) for the RATAs performed on the H2S (MS on the East and West flare gas, the TIU Mix Drum, the East side Mix Drum, and the Reformer 3 heater were not submitted to TDES a full 30 days prior to the test date.	The Relative Accuracy Test Addis (RATA) for the H ₅ S CEMS on the East and West flare gas, the TIU Mix Drum, the East Side Mix Drum and the Reformer 3 Heater were due to be completed by the end of the first quarter 2021 (i.e. March 31, 2021). BPH notified TDES informally of the plan to conduct the RATAs the week of March 23, 2021. BPH notified TDES informally of the plan to conduct the RATAs the week of March 23, 2021. Intower, pefore a formal intent to test was submitted, an unplanned outage of the neighboring Walleye Power Bayshore Plant required the Adares of the RATAs to be moved up to the week of March 9, 2021 to accommodate the outage and complete them by their due date.	BPH emailed TDES on 2/18/2021 to notify them of the proposed change in dates. TDES responded that these RATAs could be conducted with less than 30 days notice, and that the TT should be submitted ASAP. BPH submitted ASAP. BPH submitted the formal ITT on 2/2/1/2021 and testing occurred the week of March 9th.	2	No Report	No Report
Part B.2.d)(4)a, d)(5)o. [NSPS Subpart CVA as referenced by Subpart CGCs [60.5648(a); and Part 63 subpart CGCs (60.5648(a); and CF 60.482-7a(a) through (h)] A valve that begins operation after the initial startup date for the process unit shall be monitored for the first time within 30 days after the end of its startup pendo, except for a valve that replaces a leaking valve and except as provided in 40 CFR 60.482-7a(c), 60.483-1a, and 60.483-2a. Part B.2.b)(2)b. [40 CFR 63.648(a) - in accordance with 40 CFR part 63. Subpart VC, the permittee shall comply with the applicable provisions of 40 CFR Part 60. Subpart VV and 40 CFR Part 63. Subpart VV and 40 CFR Part 60. Subpart VV and 40 CFR Part 60. Subpart VV and 40 CFR Part 63.648 (b) except as provided in (a)(1), and (c)) through (i) of 40 CFR Part 63.648		×	LDAR Program	3/29/2021	3/31/2021	There were (23) untagged component identified in the Isocracker 2 (P041) unit that had not been monitored.	The Consent Decree requires quarterly review of the LDAR Contractor LeakDAS database. 23 components were apart of a P&ID audit on 03/29/2021.	The components were tagged and entered into LeakDAS database upon discover. They were then monitored on 4/1/2021.	ê 2	No Report	No Report

			ACTUAL METHOD USED	DE	DEVIATION INFORMATION	ORMATION					
	Quarterly	Semi-	٤	DEVIATION DURATION	DURATION				WAS DEVIATION	MALFUNCTION	MALFUNCTION
TITLE V PERMIT or IEU PERMIT TERM NO./Description or PTI terms for IEUs		Annual	DETERMINE COMPLIANCE	DATE / TIME DATE / TIME START END	DATE / TIME END	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - If Yes, continue to the next column)	VERBAL REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)	WRITTEN REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)
Part B, 2.d/(5)n. [NSPS Subpart VNa as referenced by Suppart GC40 GG63 and Part 63 Subpart CC: 40 GFR 60.482-6a]. "Each open-ended valve or line shall be equipped with a cap, blind flange, pluy, or a second valve, except as provided in 40 CFR 60.482-6a(d) and 40 CFR 60.482-6a(d) and 40 CFR 60.482-6a(d) and 60.5 Part 63, Subpart VC, the epermittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart VC, and 40 CFR Part CC deviation.	×		LDAR Monitoring	2/18/2021	2/19/2021	There were two (2) open-ended lines (OELs) visually in the high line section of the Reformer 3 unit	While addressing winter icing issues in the high line section or Reformer 3, operations identified 2 bleeds without plugs. It is assumed that these were left unplugged during a previous maintenance event in the Reformer 3. Since these are High lines, they were inadvertently missed.	Plugs added. As these were in the high line section, operations needed to gain access, thus the one day delay in getting plugs in the line.	Ž	No Report	No Report
Citation: B.5.a)(5)d) [40 CFR 60.107a(c). The permittee shall install, operate, and maintain equipment to continuously monitor and record NOx emissions from this emissions from until noutl to first equipment the astandard(s). The continuous monitoring and recording and ecoding and recording and ecoding and ecoding and equipment shall comply with the requirements specified in 40 CFR Part 60.	×		Continuous Emissions Monitoring System	3/24/2021 at 23:00 hours	3/30/2021 at 13:00 hours	The CEMs was down and not recording data for 43 Hours. The NOX CEMS was operational for less than 95% of the operation of the Reformer 3 heater.	CEMs unit had a diaphragm Diaphragm was replaced crack which was allowing air and analyzer was returned to leak into the system.	Diaphragm was replaced and analyzer was returned to normal operation	ž	No Report	No Report

Other than the deviations listed above (or elsewhere in this report) there were no other deviations of Part II requirements of the Title V permit and other PTIs incorporated in the Title V permit.

Ohio Environmental Protection Agency Deviation Reporting	ency		
FACILITY NAME		BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)		04-48-02-0007	
FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	H 43616
Issuance or most recent modification date	date	P0104782 - Renewal effective 08/03/17 (issued 07/13/17)	1/17 (issued 07/13/17)
QUARTERLY Reporting Period		SEMIANNUAL Reporting Period (please indicate "N/A" below in the fields if this report does not include semiannual deviation reporting)	SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)
From: 01/01/2021	To: 03/31/2021	From: 01/01/2021	To: 03/31/2021
Reporting Deadline		04/30/2021	

PART C - Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Negative Declarations (Table 1)

List each emissions unit where no deviations of any terms for the listed emissions unit occurred, or add rows as necessary to the second table (see next page) for reported deviations (one for each term as applicable; see detailed instructions for more information)

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DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS	
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THERE WERE NO DEVIATIONS OF $\overline{\text{ANY}}$ OF THE TERMS AND CO	THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS UNITS:	FOLLOWING LISTED EMISSIONS UNITS:
Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
0	×	×
B019	×	×
B029	×	×
B031	×	×
B032	×	×
B036	×	Part B-tbl 3; Part C-tbl 2 - CMS Monitoring Deviation
F001	X	×
F005	X	×
F006	×	×
J004	×	×
J005	X	×
P007	×	Part B-tbl 3 - Monitoring, Record keeping and Instrumentation Deviations
P009	X	×
P010	×	×
P011	×	×
P014	×	×
P017 (see Note 2 below)	(P017) Part C-tbl 2 - PSV leaking Deviation	×
P025 (see Note 2 below)	Part C-tbl 2 - NSPS QQQ Deviations	Part C-tbl 2 - NSPS QQQ Deviations
P036 (see Note 2 below)	×	×
P037	×	×
P048	×	×
P053	×	×
P054	×	×

THERE WERE NO DEVIATIONS OF <u>ANY</u> OF THE TERMS AND CON	THERE WERE NO DEVIATIONS OF AND THE TERMS AND CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS UNITS	FOLLOWING LISTED EMISSIONS UNITS:
Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
P803	Part C-tbl 2 - Chloride Deviation; OEL Deviation	×
Т047	×	×
Т073	×	×
T102	×	×
T120	×	Part C-tbl 2 Inspection Deviation
T139	×	×
T164 (see Note 2 below)	×	×
T170 (see Note 2 below)	×	×
T177	×	×
Group B1: B008, B009, B010	×	×
Group B2: B017, B022	×	×
Group B3: B030, B033	×	×
Group B4: B034, B035	×	×
Group P1: P021, P022, P023 (see Note 2 below)	(P022) Part C-tbl 2 - PSV leaking Deviation	×
Group P2: P028, P029 (see Note 2 below)	×	×
Group P3: P041, P043 (see Note 2 below)	(P041) Part C-tbl 2 - PSV leaking Deviation;	(P041) Part C-tbl2; Part B-tbl 3 - LDAR Monitoring Deviation
Group P4: P003, P004	Part C-tbl 2 - H2S Deviations	Part C-tbl 2 and Part B-tbl 3 - Monitoring, Record keeping and Instrumentation Deviations; ITT Reporting Deviation
Group P5: P055, P056, P057, P058	×	×
Group P6: P059, P060, P063	×	×
Group P7: P044, P045	×	×
Group T1: T078, T080, T081, T082, T086, T087, T088, T092, T100, T107, T108, T109, T110, T111, T175, T176, T182, T183, T184, T190	×	×
Group T2: T113, T114, T115, T116	×	×
Group T3: T089, T153, T154, T155, T156, T157, T161	×	×
Group T4: T010, T011, T012, T013, T014, T051	×	×
Group T5: T045, T046	×	×
Group T6: T019, T084, T174, T187, T188	×	×
Group T7: T016, T017, T019, T020, T021, T024, T025, T026, T027, T028, T029, T030, T031, T032, T033, T034, T035, T036, T037, T038, T039, T040, T041, T044, T059, T060, T085, T090, T091, T096, T097	×	(T020, T027, T028, T029, T030, T031, T033, T034, T036, T038, T039, T060, T097) Part C-tbl 2 Inspection Deviation
Group T8: T166, T167	X	X
Group T9: T136, T137, T138	×	×
Notes:		

Notes:
1 - This unit has a vent which is routed to a flare and could potentially experience a deviation.
2 - This unit has a vent which is routed to a flare that experienced a deviation. If the vent was active at that time, it may constitute a deviation for this emission unit.

MALFUNCTION	WRITTEN REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report	No Report
MALFUNCTION	VERBAL REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report	No Report
WAS DEVIATION	ATTRIBUTABLE TO A	MALFUNCTION? (Yes or No - If Yes, continue to the next column)	2	ž	2
	CORRECTIVE ACTIONS /	PREVENTATIVE MEASURES TAKEN	A compliance plan was developed for the findings from the QQQ Audit and was submitted to TDES on July 21, 2020. Per this plan, the audit finding for these drains was to be reviewed and verified prior to becoming a find deviation. The verification for these drains was sompleted on July 21, 2020; and the two drains are scheduled to be upgraded with water seals by December 31, 2021.	A compliance plan was developed for the findings from the QOQ Audit and was submitted to TDES on July 21, 2020. Per this plan, the audit finding for these drains was to be reviewed and verified prior to be reviewed and verified prior to be becoming a final deviation. The verification for these drains was completed on September 30, 2020. The drains are scheduled to be upgraded with water seals by December 31, 2021.	A compliance plan was the QoQ Audit and was submitted to TDEs on July 21, 2020. Per this plan the audit finding for this equipment was to be reviewed and verified prior to be completed on December 31, 2020. The upgrades are scheduled to be completed by December 31, 2022.
	H GCD HOUSE	DEVIATION	These drains were previously interpreted to be exempt because they were installed pre-1987. An NSPS QQQ audit was conducted in late 2019 per a recent Consent Decree at the BPH refinery. This audit found that these drains should be part of the since they are used for dewatering the slop oil management system since they are used for dewatering the slop oil tanks, and therefore the drains should be controlled.	An NSPS QQQ audit was conducted in late 2019 per a recent Consear Decree at the BPH refinery. This audit found that BPH inadvertently missed induding one area drain and three hub drains in the NHT Feed and Desafter area in the refinery NSPS QQQ Management Program when junction boxes (manholes) were modified for TFO project.	An NSPS QQQ audit was conducted in late 2019 per a recent Consent Decree at the Per refinery. This audit found that BPH inadvertently missed including two area drain, whelve hub drains, and three carch basins in the refinery NSPS QQQ Management Program when junction boxes (manholes) were modified for the Flare Gas and Recovery Treating Project.
NOIL	IATION	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	The oily wastewater from slop oil handling equipment, tanks 79 and 697 are not collected, stroad, transported, recycled, reused, or disposed of in endosed individual drain system.	One area drain and three hub drains in the NHT Feed and Desalter area were not controlled with water seals and have not been monitored pursuant to NSPS QQQ requirements.	Two areas drains, twelve hub drains, and three catch basins in the Hydrogen Unit area were not controlled with water seals and have not been monitored pursuant to NSPS QQQ requirements.
DEVIATION	INFORMATION	DURATION Date / Time End	3/31/2021	3/31/2021	3/31/2021
		DEVIATION DURATION Date / Time	4/22/2020	4/22/2020	4/22/2020
	ACTUAL	TO DETERMINE COMPLIANCE	Program Audit	Program Audit	Program Audit
rting	nt (choose both)	Semi- Annual		×	×
Reporting	Requirement (choose one or both)	Quarterly	×	×	×
	S ON WIND	DESCRIPTION	Citation: P025 Part C.18.b/(1). The refinery shall comply with the requirements of NSPS QQQ—(40 CFR 60.892.3(e)). Slop oil from an oil-water spearator thank and oily wastewater from slop oil handling equipment shall be collected, stored, transported, recycled, reused, or disposed of in an enclosed system Part C.18.c)(3)(c)-[\$60.692-2(a)]. Each drain shall be equipped with a water seal.	Citation: P025: Part C.18.b)(1), b)(2)j.j and ii.j. ii.j. corRe 6.03604(11) The provisions of Subpart OGO apply to affected facilities located in petroleum refinencies for which construction, modification, or reconstruction, commenced after May 4, 1987. Part C.18.c(3)(c), d)(5)(c); §66.692. Part C.18.c(3)(c), d)(5)(c); §66.692. [43).Each drain subject to G.FR 60.892-2 shall equipped with water seal controls. If a drain is in active service, water seal controls shall be checked by visual or physical inspection monthly.	citation: P025: Part C.18.b)(1), b)(2)j.j and ii; (bCFR 60.890(a)(1)) The provisions of Subpart QQC apply to affected facilities located in petroleum refilments of within construction, modification, or reconstruction, commenced after May 4, 1987. Part C.18.c.(3)(c), d)(5)(c); (\$66.692-21) = Each drain subject to QCFR 60.892-2 shall equipped with water seal controls, far drain is in active service, water seal controls shall be checked by visual or physical inspection monthly.
Onio Env	EMISSIONS UNIT	(EC) NOWBER & DESCRIPTION (See below)	P025 - Refinery WWT System	P025 - Refinery WWT System	P025 - Refinery WWT System

MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "NO	REPORTS" in the space below)	No Report	No Report
MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state "NO	REPORTS" in the space below)	No Report	No Report
WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION? (Yes or No - If Yes,	continue to the next column)	N _O	Q.
	PREVENTATIVE MEASURES TAKEN		A compliance plan was developed for the findings from the QQQ Audit and was submitted to TDES on July 21, 2020. Per this plan, the audit finding for this equipment was to be reviewed and verified prior to be reviewed and verified by the property of the prior that the property of the prior that the Queen that the Q	BPH emailed TDES on 2/18/2021 to notify them of the proposed change in dates. TDES responded that these RATAs could be conducted with less than 30 days notice, and that the TIT should be submitted ASAP. BPH submitted the formal ITT on 2/2/1/2021 and testing occurred the week of testing occurred the week of
HE GOT BOLLO BY BY BODD	DEVIATION		An NSPS QQQ audit was conducted in late 2019 per a recent Consent Decree at the BPH refinery. This audit found that the 2016 Applicability Assessment report that had previously identified the 1993 Beazene Stripper project as not triggering the requirements of NSPS QQQ was incorrect. The 14 drain hubs, 4 clear-outs, 10 catch basins and 5 manholes installed as part of the Benzene Stripper project are subject to the requirements of NSPS QQQ.	The Relative Accuracy Test Audits (RATA) for the H2S CEMS on the East and West alrar gas were due to be completed by the end of the first quarter 2020 (i.e. March 31, 2021). BPH notified TDES informally of the plan to conduct the formal intent to conduct the RATAs the week of March 23, 2021. However, before a contract of the plan to conduct the conduction of the plan to allow the west of March 23, 2021. However, before a submitted, an unplanned outage of the neighboring usage of the neighboring evek of March 9, 2021 to accommodate the outage and complete them by their due dates.
DEVIATION INFORMATION	DESCRIPTION AND	MAGNITUDE OF THE DEVIATION	Fourteen drain hubs, four clean- bouts, ten cathol basins, and five manholes that were part of the 1993 Benzene Stripper project were not designed to meet the requirements of NSPS QQQ_ have not been monitored	The Intent to Test (ITT) for the RATA on the East and West flare gas H2S CMS were not submitted to TDEs a full 30 days prior to the test date.
DEVI	OURATION	Date / Time End	3/31/2021	2/21/2021
	DEVIATION DURATION	Date / Time Start	4/22/2020	2/8/2021
ACTUAL	TO DETERMINE	COMPLIANCE	Program Audit	Reporting
rting nt (choose both)	Semi	Annual	×	×
Reporting Requirement (choose one or both)		Quarterly	×	
Y I III	DESCRIPTION		Citation: P025: Part C.18.b)(1), b)(2)ji and lii; (40 CFR 60.890(a)(1)] The provisions of Subpart QOC apply to affected facilities located in petroleum refinencies of which construction, modification, or reconstruction, modification, or reconstruction commenced after May 4, 1987. Part C.18.c.(3)(4), a)(5)(5)(5)(5)(5)(5)(6)(6)(5)(6)(6)(6)(6)(6)(6)(6)(6)(6)(6)(6)(6)(6)	Citation: P003/P004; Part C.40.d)(4)m [40 CFR 60.107a(10)], 60.3(c), 60.8(d)] NNSPS Jal The permittee shall conduct performence evaluations for each H2S months according to the requirements of 40 CFR 60.13(c) and Performance Specification 7 of appendix B to part 60. (40 CFR 60.13(c) and Performance Specification 7 of appendix B to part 60. (40 CFR 60.13(c) and Performance or operator of an affected facility shall conduct a performance evaluation of the continuous semission monitoring system and West required under \$60.8. Hydrocarbon Flare Hower or operator of an affected and West required under \$60.8. Hydrocarbon Flare Hower or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test except as specified under other subparts, to afford the Administrator at least 30 days prior notice of any performance test except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. [Part C.40.1/5] Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests, [Also reported in Part B-tbl 3]
EMISSIONS UNIT	DESCRIPTION	(See below)	P025 - Refinery WWT System	P003/ P004 - East and West Hydrocarbon Flare

MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report
MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report
WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION? (Yes or No - If Yes, continue to the next column)	2	ĝ.
	PREVENTATIVE MEASURES TAKEN	This deviation was first identified in 10,2020 for two flare gas flow meters. A capital project is planned to update these flow meters and bringate these flow meters and bringate them into compliance. BPH is still finalizing the schedule for these repairs. After the flow meters were identified, BPH began an ongoing investigation to identify all of the instrumentation of the instrumentation of the instrumentation of the instrumentation. C.C. Specifically, BPH is reviewing the pressure and temperature sensors on the flow meters to determine if there are additional upgrades to be made. This issue is ongoing and BPH will report the date of the final updates when it is available.	A Capital Project has been initiated to confirm all of the Table 41 requirements for two flow meters in FCOU used for compliance for MACT UUU. It is expected that any equipment identified that is of compliance will be replaced during the scheduled for the 2022 FCC Unit Turnaround. In addition, BPH will review the temperature and pressure sensor associated with the flow meters for compliance and brought into compliance and brought into compliance and deficiencies are discovered.
THE GOT BOLLOOF INVESTIGATION	DEVIATION	The refinery sector rule updated 40 CFR 63 Subpart CC requirements in 2015 to include new flare instrumentation requirements. BPH immediately began implementing their plan to come in to compliance and as they have operated, additional flare instrumentation has been identified that does not meet the MACT CC.—Table 13 requirements.	The Refinery Sector Rule USRS modifications to MACT UUU require additional accuracy and maintenance requirements of certain FCCU process instrumentation. BP discovered some instrumentation not originally included for MACT UUU compliance.
DEVIATION INFORMATION	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	BPH has identified monitoring Instrumentation in the hydrocarbon flare system that does not meet all of the requirement of 40 CFR 63.877 of Subpart CC.	FCCU Instrumentation used to demonstrate compliance may note in compliance with all the installation peration and maintenance requirements of MACT UUU Table 41.
DEVIATION INFORMATIO	DURATION Date / Time End	3/31/2021	12/31/2020
	DEVIATION DURATION Date / Time	1/31/2020	1/1/2019
ACTUAL	TO DETERMINE COMPLIANCE	Continuous Parameter Monitoring System (CPMSs)	Continuous Parameter Monitoring System (CPMSs)
rting nt (choose both)	Semi- Annual	×	×
Reporting Requirement (choose one or both)	Quarterly		
TITI E V DEDMIT TEDM NO 8		Citation: P003/P004; Part C.40.d)(2) The permittee shall comply with the applicable monitoring and record keeping requirements required in 4.0 CFR 63, Subpart CC; [Viole: three is not a specific Title V reference to the following requirement] 140 CFR 63 Subpart CC; 40 CFR 53.6.71(a)] 140 CFR 63 Subpart CC; 40 CFR 53.6.71(a)] 140 CFR 63 Subpart CC; 40 CFR 63.6.71(a)] 141 Applicable provisions in §53.6.70; with applicable provisions in §53.6.70; the owner or operator shall install. Operate, califorte, and manitain the CPMS as specified in paragraphs (a)(1) through (6) of this section. (1) Except for CPMS installed for pilot flame monitoring, all monitoring equipment must meet the applicable minimum accuracy, califaction and quality control requirements specified in table 13 of this subpart. [Also reported in Part B-bl 3]	Citation: P007, Part C.12. d)(17)(i) [§ 63.1572(c)(1)] You must install poperate, and maintain each continuous perate, and maintain each continuous parameter monitoring system according to the requirements in Table 4 of this subpart which include requirements regarding accuracy, calibrations and inspection/checks.
EMISSIONS UNIT	(See below)	Poos/Pood - East and West Hydrocarbon Flare	Poo7 (FCCU / CO Boller)

MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report	No Report
MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report	No Report
WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION; (Yes or No - If Yes, continue to the next column)	2 Z	Ž	2 2
	PREVENTATIVE MEASURES TAKEN	Operations replaced the PSV and it was monitored with an instrument reading less than 500 ppm above background as detected by Method 21 of 40 CFR part 60.	During the Alky2 Unit shutdown the pilot type PSV was replaced with a more reliable belanced bellows type PSV. Additionally, inlet and outlet block valves were added to PSV 411 to allow for the PSV to be replaced in the future without having to take the entire unit down. The pressure relied edvice was monitored with an instrument reading less than 500 ppm above background as detected by Method 21 of 40	The PSV was removed from VOC service on 3/25/2021. Operations replaced PSV on 3/27/2021 and the pressure relief device was monitored with an instrument reading less than 500 ppm above background as detected by Method 21 of 40 CFR part 60.
PRORARI F.CALISE FOR THE	DEVIATION	Operators in the Isocracker Unit smelled H ₂ S in the area and contacted the LDAR contractor in order to identify the source of the leak. Upon monitoring PSV 01, it was discovered to be leaking. Internal damage to the PSV is assumed to be the cause of the leak.	It is believed that the pilot sense line froze due to cold weather, which caused PSV was monitored after the lift and it was determined to be leaking. It is assumed that the cold weather damaged the PSV and caused the le	During the re-routing operation of off-gas from the EPA wash tower and amine system to the Old Coker Contractor PSY 1250 that protects the Coker Contractor lifted due to operational changes. When the PSY was monitored after the Iff, it was discovered that it was leaking.
ATION	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	The PSV 01 pilot/ bellows was monitored with an instrument reading above 500 ppm/ above background as detected by Method 21 of 40 CFR part 60	The PSV 411 Pilot/bellows was monitored with an instrument reading above 500 ppmv above background as detected by Method 21 of 40 CFR part 60	PSV 1250 bellows was monitored with an instrument reading above 500 ppmv above background as detected by Method 21 of 40 CFR part 60
DEVIATION INFORMATION	DURATION Date / Time End	1/19/2021	3/17/2021	3/25/2021
	DEVIATION DURATION Date / Time	1/14/2021	3/3/2021	3/20/2021
ACTUAL METHOD LISED	TO DETERMINE COMPLIANCE	LDAR Monitoring	LDAR Monitoring	LDAR Monitoring
ting nt (choose both)	Semi- Annual			
Reporting Requirement (choose one or both)	Quarterly	×	×	×
S C N W W H H H H H H H H H H H H H H H H H	DESCRIPTION	Citation P041; Part C.39.b)(1)a., d., Iln accordance with AU CFR 63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program.] 40 CFR 63.648(b)(11) Operating requirements. Except during a pressure release, operate each pressure relief device in organic HAP gas or vapor service with an instrument reading of 16ss sthan 500 ppm above background as detected by Method 21 of 40 CFR part 60, appendix A-7.	Citation P022; Part C.37.b)(1)d. [In accordance with 40 CFR 63.640(c)(4) and 63.648(a)(1), this emissions until has equipment in organic HAP service and is subject to the Retinery MACT LDAR program.] [40 CFR 63.648(j)(1)] [40 CFR 63.648(j)(1)] [50 CPR 63.648(j)(1)	Citation P017; Part C.17.b)(1)f. In accordance with 40 CFR 63.640 this emissions until includes equipment leaks from a petroleum refining process until that is located at an existing major source of HAP subject to the emission limitations and control measures.] 40 CFR 63.646(j/k1) Cperating requirements. Except during a pressure release, operate each pressure release, operate each pressure release, operate each gas or vapor service with an instrument reading of less than 500 ppm above background as detected by Method 21 of 40 CFR part 60, appendix A-7.
EMISSIONS UNIT	(See below)	P041 - Isocracker 2	P022 - Alky 2 Unit	P017 - Coker 2

z ш	o se	e Pe			
MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "NO	REPORTS" in the space below)	No Report	No Report	No Report
MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state "NO	REPORTS" in the space below)	No Report	No Report	No Report
WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION? (Yes or No - If Yes,	continue to the next column)	<u>8</u>	92	<u>8</u>
	о.		Operations applied temporary steam and insulation to the pilot line until the PSV reseated, which stopped the flow of high H ₂ S gas to the flare. The PSV was replaced during the Alky 2 Unit shutdown with a more reliable type of PSV to prevent this incident from occurring in the future.	The flare gas recovery compressor was restarded as soon as safety bossible. ISO2 reactor was purged with H ₂ and N ₂ as per shutdown procedures. Flaring stopped when the compressor was fully operational and all streams were being full recovered by the refinery's the flare gas recovery system.	All tanks identified had their inspections completed by the end of 10,2021. BPH is updating their compliance tasking software with the requirements of 40 CF 63 Subpart VWV so that these inspections will not be missed in the future.
HIT GOD BOLLAGE HAVE	PROBABLE CAUSE FOR THE DEVIATION		The sense line on a pilot-type PSV located on top of the DIB tower in the Aky 2 Unit (P022) froze due to weather. This caused the PSV to lift and route high H ₂ S gas to the flare.	The ISO2 High Pressure Separator level indicator had a false alarm winch caused the recycle gas compressor to fruit and the unit dump valve to open stending high H ₂ S material to flare gas recovery.	BPH conducted an internal audit was conducted on the mar applicable requirements of 40 CFR 83 Subpart WWV from this audit were finalized in 102021. It was discovered that while BPH was completing all of the 5-year inspection requirements, there was an additional fo-year inspection requirement for the floating or of deck, deck fittings or ring seals that had not been completed. This was a new requirement this was new requirement that was new requirement that was new requirement.
DEVIATION INFORMATION	DESCRIPTION AND	MAGNITUDE OF THE DEVIATION	The H ₂ S concentration in the flared gas exceeded 162 ppmv H ₂ S for (12) 3-hr rolling averages	The H ₂ S concentration in the flared gas exceeded 162 ppmv H ₂ S for (43) 3-hr rolling averages	Thirteen (13) of the Group 1 EFR tanks included in the Tritle Of Group 77 their Floating roof deck, deck fittings, or rim seals were not inspected as specified in 40 CFR 63.1063(0)(tij); within 10 years as specified in paragraph 63.1063(a)
DEVI	DURATION	Date / Time End	01/30/2021 at 18:00 hrs	03/11/2021 at 19:00 hrs	See attached Table 1
	DEVIATION DURATION	Date / Time Start	01/30/2021 at 07:00 hrs	03/09/2021 at 22:00 hrs	See attached Table 1
ACTUAL	TO DETERMINE	COMPLIANCE	Continuous Monitoring System (CEMS)	Continuous Monitoring System (CEMS)	Compliance Tasking Database
rting nt (choose both)	Semi	Annual			×
Reporting Requirement (choose one or both)		Quarterly	×	×	
S ON MOST TIMES	<u> </u>		Citation: P003, Part C.40.b)(2)d. [40 CFR 60.103a.th]) The permittee shall not burn in any affected flare any fuel gas that contains H ₂ S in excess of 162 ppmv determined hourly on a 3- hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency mailfunctions is exempt from this limit.	Citation: P003, P004 Part C.40.b)(2)d. [40 CFR 60.103a.(h)] The permittee shall not burn in any affected flare any luel gas that contains H ₂ S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.	Citation: T7 EFR - Part C.50.b)(1)c. 140 CFR 63.546 (ref) 140 CFR 63.560] 140 CFR 63.546 (ref) 140 CFR 63.560] 140 CFR 63.546 (ref) 140 CFR 63.560] 150 CFR 63.546 (ref) 140 CFR 63.560] 150 CFR 63.540 (ref) 140 CFR 63.540 part WW or SC (BPH has selected Subpart WW of CFR 63.1063(c)(2)(iii)] EFRs shall 140 CFR 63.1063(c)(1)(iii)] Following 140 CFR 63.1063(c)(1)(iiii)] Following 140 CFR 63.1063(c)(1)(iiiii)] Following 140 CFR 63.1063(c)(iiii
EMISSIONS UNIT	DESCRIPTION	(xee below)	P003 (East Flare)	P003 (East Flare); P004 (West Flare)	Emissions Unit Group - TF EFR. 1020, 1027, 1038, 1033, 1034, 1036, 1038, 1039, 1060, 1039, 1039, 1060,

	Φ	D			
MALFUNCTION WRITTEN REPORT DATE	made, state "NO	space below)	No Report	No Report	No Report
MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state "NO perports" in the	space below)	No Report	No Report	No Report
	(Yes or No - If Yes,	columne to the treat	o _Z	9	2
CORRECTIVE ACTIONS /			The inspection was completed by the end of 102021. BPH is updating their compliance tasking software with the requirements of 40 CFR 63 Subpart VW so that these inspections will not be missed in the future.	The components were tagged and entered into LeakDAS database upon discover. They were then monitored on 4/1/2021.	Plugs added. As these were in the high line section, operations needed to gain access, thus the one day delay in getting plugs in the line.
PRORARI E CALISE FOR THE	DEVIATION		BPH conducted an internal audit was conducted on the new applicable requirements of 40 CFR 63 Subpart WW for Group 1 EFR. The findings from this audit were finalized in 10,2021. It was discovered that while BPH was competing all of the 5-year inspection requirements, there was an additional 10-year inspection requirements, there was an additional 10-year inspection of deck, deck fittings or rim seals that had not been completed. This was a new requirement that was new requirement that was new requirement that was nadouterently missed.	The Consent Decree requires quarterly review of the LDAR Confractor LeakDAS database. 23 components were discovered as part of a P&ID audit on the Isocracker 2 Unit on 03/29/2021.	While addressing winter icing issues in the high line section of Reformer 3, operations identified 2 bleeds without plugs. Since these are High lines, they were inadvertently missed.
DEVIATION INFORMATION	DESCRIPTION AND	OF THE DEVIATION	This Group 1 EFR tank was not inspected as specified in 40 CFR 63.1063(d)(1)(iii) - the Flaatings, or im seals were not inspected as specified in 40 CFR 63.1063(d)(1)(iii) - within 10 years as specified in paragraph 63.1063(a)	There were (23) untagged component identified in the Isocracker 2 (P041) unit that had not been monitored.	There were two (2) openended lines (OELs) visually identified by operations.
DEVIATION INFORMATIO	DURATION	Date / IIme End	3/26/2021	3/31/2021	2/19/2021
	DEVIATION DURATION	Date / IIme Start	7/22/2019	3/29/2021	2/18/2021
ACTUAL METHOD LISED	TO DETERMINE		Compliance Tasking Database	LDAR Monitoring	LDAR Monitoring
Reporting Requirement (choose one or both)	Semi-	Annua	×	×	
Reporting Requirement (chone or both)	Quarterly	gaarch			×
TITI S ON ON ON O			Ciration T120 - Part C.28.b)(1)d. [40 CFR 63.640 (ref. 83.640 (ref. 83.640 (ref.) [40 CFR 63.640] and [40 CFR 63.646 (ref.) [40 CFR 63.640] and or existing source as specified in §63.640(h), the Group 1 storage vessel shall comply with either the requirements in 40 CFR 63 Subpart WW or SS (BPH has selected Subpart has selected as pecified in 63.1063(d)(1)). Posting roof deck, deck fittings, or rim seals that are not functioning as designed (as specified in paragraph (a) of this section	Citation P041; Part C.39.b)(1)a., d., [In accordance with 40 CFR 63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program.]	Citation P803; Part C.24.b)(1)g, b)(2)h, (40 CFR 63 Subpart CC; 40 CFR 63 Subpart CG; 40 In accordance with 40 CFR 63.540(c)(4) and 63.548(a)(1), this emissions unit has equipment in OAAP service subject to the Refinery MACT LDAR Program. IDAR Program IPPA 40 CFR R63.540(b)(2), equipment leaks that are also subject to the provisions of 40 CFR Part 60, Subpart GGGa, are required to comply only with the provisions specified in 40 CFR Part 60. Subpart 60 Subpart GGGB, Subpar
EMISSIONS UNIT	DESCRIPTION (See below)		T120 - EFR., PR- 500132	P041 - Isocracker 2	P803 (Ref 3 Unit)

7	e ~	o o			
MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "NO	REPORTS" in the space below)	No Report	No Report	No Report
MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state "NO	REPORTS" in the space below)	No Report	No Report	No Report
WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION? (Yes or No - If Yes,	continue to the next column)	o Z	9 <u>/</u>	2
CORRECTIVE ACTIONS /			CEMs unit had a diaptragm Diaptragm was replaced and crack which was allowing air to analyzer was returned to normal leak into the system.	The Perc injection pump flowmeter was recalibrated to ensure proper addition.	BPH has prepared an Initial Commpliance Status Report and submitted to EPA Region 5 on April 29. 2021.
THE GOT ISE FOR THE	PROBABLE CAUSE FOR THE DEVIATION		CEMs unit had a diaphragm crack which was allowing air to leak into the system.	There was a high concentration of chlorides on the Reformer 3 catalyst due to an over injection from the perconcentration from the perconcentration caused the weekly average, which is made up of three norconsecutive samples, over 1.8% chloride in the catalyst leaving the Regenerator.	BPH's modification of the PC14651 triggered NSPS NNN applicability to the distillation system. BPH complies with NNN by the procedures in the system to the referrency full agas system. No monitoring or testing is required. However, Part 65 requires submittal of an Initial Compliance Status report application to Ohio EPA on ESPA's submittal of an Initial Compliance Status report application to Ohio EPA on ESPA's submittal of an Initial Compliance Status report the requirement to submit an Initial Compliance Status report application to Ohio EPA on Report, however, a copy was interedurement to submit an Initial Compliance Status Report, however, a copy was inadvertently not set to EPA within 60 days of startup.
DEVIATION INFORMATION	DESCRIPTION AND	MAGNITUDE OF THE DEVIATION	The CEMs was down and not recording data for 43 Hours. The Nox CEMS was operational for less than 95% of the operation of the Reformer 3 heater.	The regenerator operated such that the weekly average outlet coloride concentration was greater than 1.8% weight of the ChlorsorbTM System recommended concentration.	BPH did not submit to EPA within 60 days a copy of the the Initial Compliance Status Report required by 40 CFR 65.5 (Consulidated Air Rule) which is referenced by NSPS NNN for the Coude/Nac 2 unit after startup of a modification that triggered NSPS applicability.
DEVIATION INFORMATIC	DURATION	Date / Time End	3/30/2021 at 13:00 hours	3/13/2021	3/31/2021
	DEVIATION DURATION	Date / Time Start	3/24/2021 at 23:00 hours	317/2021	1/1/2021
ACTUAL METHOD LISED	TO DETERMINE	COMPLIANCE	Continuous Emissions Monitoring System	Records review	Records Review
Reporting Requirement (choose one or both)	Sami	Annual	×		×
Reporting Requirement (ch one or both)		Quarterly		×	
S ON MGEL TIM GEG V ELITE			Citation: B036 Part C.6.b)(1)g. f)(1)j [40 CFR 60 Subpart Ja] Ongoing compliance shall be demonstrated based upon the NOx CEMS monitoring and record keeping requirements contained in the Monitoring and Record Keeping Section d) of this permit; term B.5 of Section B.	Citation: P803 Part C.24 d)(1)(d)c [40 CFR 63.1567 Subpart UUU Table 28 option 5(c)] Reformers using ChlorsorbTM System must collect samples of the sorbert acting the adsorption system three times per week (on non-consecutive days); and recording the weekly average chloride concentration; and maintaining the chloride concentration below the design or manufacturer's recommended limit (1.8 weight percent ChlorsorbTM System).	Citation: PTI P0124661 P010 Part C.(1) e)(5) Comply with Reporting requirements of 40 CFR Part 65, Subpart A. [40 CFR 65.5 (c) 8 (g)]- (nitial Compliance Status Report—(1) Contents. The owner or operator shall submit an Initial Compliance Status Report This information can be submitted as pand of alter by the post of the pos
EMISSIONS UNIT	DESCRIPTION	(See below)	B036 (Ref 3 Heater)	P803 (Ref 3 Unit)	P010 (Crude/Vac 2)





30-Jul-2021

City of Toledo Division of Environmental Services 348 S. Erie Street Toledo, OH 43604

Attn.: Peter Park

RE: Title V Quarterly Deviation Report – 2nd Quarter 2021

Dear Peter:

Des Gillen President BP-Husky Refining LLC 4001 Cedar Point Road Oregon, OH 43616 P 567.698.4529 des.gillen@se1.bp.com

The Title V Permit (P0104782) issued to BP-Husky Refining LLC Toledo Refinery (formerly the Toledo Refinery of BP Products North America Inc.) (hereinafter referred to as BP-Husky) effective on August 3, 2017 requires reports to be submitted quarterly outlining known deviations of emission limitations, operational restrictions, or control device operating parameter limitations. The permit also requires semi-annual reports outlining deviations of requirements in the permit, principally the monitoring, recordkeeping, and reporting (MRR) requirements. The permittee chooses to report known MRR semi-annual deviations identified during the quarter in its quarterly deviation report.

This letter and its attachments constitute the Title V Deviation Report reflecting the deviations identified during the third quarter of the 2020 calendar year (July 1 through September 30, 2020), including MRR deviations identified at the time of this report that are required to be reported semi-annually. The requirement for these reports is contained in Part A. of the Title V Permit as Standard Term and Condition, A.2.c. This report also satisfies the requirement for such reporting in OAC Rule 3745-77-07(A)(3)(c).

In order to consolidate reports, this letter and its attachments also constitute the deviation reports for all the Permits to Install (PTIs) that have been incorporated into the Title V Permit and which have PTI requirements for deviation reporting. All known deviations of the Title V Permit and currently effective PTIs are presented in the attached quarterly deviation report. Also, the following provides some additional background on a few of the issues relevant to this report.

Coker 3 Furnace (B032) CEMS Downtime >5%

During the 2nd quarter, the TIU Mix Drum Total Sulfur (TS) CEMS was down for 96 hours due to a drift test failing on the analyzer. The Coker 3 Furnace was offline during part of the quarter, which resulted in reduced operating time for the quarter. The 96 hours of TS CEMS downtime, along with the reduced operating time of the Coker 3 Furnace, resulted

in greater than 5% downtime for the Furnace. Note: The downtime for the TS CEMS at the TIU Mix Drum was less than 5%.

LDAR Tagging Audit

During the 1st Quarter of 2021, BPH undertook an effort to field verify 100% of LDAR components against site LDAR drawings. The decision to conduct the 100% Tagging Audit was voluntarily made following the discovery of 84 components in the 2020 Annual Unit Walkthrough Audits as required in the 2020 Consent Decree. As of June 30th, the refinery has completed 87% of the site components and is expected to complete the audit in August 2021.

B034 and B035 East and West Alstom Boiler Linearity test

During the 2nd quarter, the East and West Alstom Boiler linearity test was inadvertently missed in April, as required in 40 CFR 75. Upon discovery, the test was completed as soon as possible on both the East and West Alstom boilers. After completion of the initial linearity test, it was discovered that all 40 CFR 60 requirements were met; however, 40 CFR 75 requires that the boiler be operating during the completion of the linearity test. During the original test completed on May 13, 2021, the East Alstom boiler was offline. The boiler was brought online June 5, 2021; therefore, a new linearity test was completed on July 20, 2021.

This report and cover letter were prepared in accordance with a system designed to assure that qualified personnel evaluated all reasonably available information relevant to compliance with the terms and conditions of the Title V Permit over the period covered by the report and that they then reported to me their conclusions with respect to compliance. Based on my inquiry of those persons, I believe the contents of the enclosed report and this cover letter to be true, accurate, and complete. However, the certification of this report and cover letter should not be interpreted to imply that I have personally reviewed all documents, data, or other information underlying the compliance determination. Nor should it be read to imply that the persons responsible for gathering and evaluating the information relied on in preparing this report and cover letter have reviewed all information generated by operations at the facility. As with any regulatory program, it is possible that there were deviations from permit conditions which may not be identified in the normal course of a good faith effort to implement the required compliance efforts under these programs.

In addition, the certification of this report and cover letter should not be construed as containing any admissions that the reported deviations or other events are violations of any applicable requirement. In some cases, applicable rules contain various defenses and/or exemptions which may excuse particular deviations. In other cases, the question of whether a particular event constituted a deviation or violation may be subject to interpretational disputes. In still other cases, events may be reported as deviations out of an abundance of caution despite the fact there is insufficient information to determine whether the deviation actually occurred.

Title V Quarterly Deviation Report - 2nd Quarter 2021

30-Jul-2021

If you have any questions concerning this report, please contact Ashley Zapp (<u>ashley.zapp@bp.com</u> or 567-698-4410).

Sincerely,

—DocuSigned by:

Des Gillen—90F20640AD13450...

Des Gillen

President - BP-Husky Refining LLC

Ohio Environmental Protection Agency		
Deviation Reporting Form		
FACILITY NAME	BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)	04-48-02-0007	
FACILITY ADDRESS	4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date	P0104782 - Renewal effective 08/03/17 (issued 07/13/17)	1 07/13/17)
QUARTERLY Reporting Period	SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	te "N/A" below in the "From" and "To" I deviation reporting)
From: 04/01/2021 To: 06/30/20201	From: 04/01/2021	To: 06/30/20201
Total pages in report, including this one (signature page and sections I, II, and III)	18	
Please list any supporting attachments	None	
Reporting deadline	1202/30/2021	

NOTE: The deviation reporting period shall be stated in the following format: "xx/xx/xx through zz/zz/zz" where xx/xx/xx and zz/zz/zz are the beginning and end dates for the deviation reporting period respectively.

SIGNATURE FOR STATEMENT
This statement shall be signed by the responsible official as defined in OAC rule 3745-77-01(GG). Making of any false material statement, representation or certification constitutes a violation of ORC 3704.05(H), and subjects the responsible party signing this statement to civil and/or criminal penalties as provided in ORC 3704.06(C) and ORC 3704.

CERTIFICATION

Based on information and belief formed after reasonable inquiry, I hereby affirm, as stated in OAC rule 3745-77-03(D), that the statements and information as transmitted in this Title V report are true, accurate and complete to the best of my knowledge.

	30-Jul-2021	President, BP-Husky Refining LLC
	Date	Title
DocuSigned by:	Des Gillen	Des Gillen
	Authorized Signature	Name (Please Print)

DocuSign Envelope ID: 62A526DE-1779-4AE3-A80B-51138D67286F

PROBABLE CAUSE FOR | CORRECTIVE ACTIONS / The components were tagged The components were tagged **MEASURES TAKEN** and entered into LeakDAS and entered into LeakDAS database upon discovery. database upon discovery. **PREVENTATIVE** completed on 4/14/2021. completed on 6/14/2021. SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" Part A - Page 2 The monitoring was The monitoring was THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART A OF THE TITLE V PERMIT DURING THE REPORTING PERIOD Add rows as necessary to the following table for reported deviations (one for each General Term as applicable; see detailed instructions for more information) (Table 2) fields if this report does not include semiannual deviation reporting) components identified as part of an enhanced P&ID tagging components identified as part of an enhanced P&ID tagging database and therefore, were audit in the in the Coker Gas As part of the annual Process not tagged, and had not been As part of the annual Process audit in the DIB tower that Unit LDAR walk-throughs Unit LDAR walk-throughs P0104782 - Renewal effective 08/03/17 (issued 07/13/17) Plant that were not in the THE DEVIATION required by the Consent required by the Consent were not in the LDAR Decree, there were Decree, there were To: 06/30/20201 4001 Cedar Point Road, Oregon, OH 43616 monitored. Gas Plant (P068) that had not been There were a total of (3) untagged There were a total of (1) untagged component identified in the Coker Tower (P065) that had not been component identified in the DIB OF THE DEVIATION **DESCRIPTION AND** MAGNITUDE **BP-Husky Refining LLC** From: 04/01/2021 04-48-02-0007 07/30/2021 INFORMATION monitored. monitored. DEVIATION DATE / TIME DATE / TIME **DEVIATION DURATION** 6/14/2021 4/14/2021 (PART A) - General Terms and Conditions (Permit Requirement Reporting) Mark the following box with an 'X' if no General Terms and Conditions deviations occurred 4/1/2021 4/1/2021 START To: 06/30/20201 Reporting Requirement | ACTUAL METHOD LDAR Program COMPLIANCE DETERMINE **USED TO** Issuance or most recent modification date Ohio Environmental Protection Agency FACILITY ID (PREMISE NUMBER) Annual Semi-**QUARTERLY** Reporting Period (Choose one) Quarterly FACILITY ADDRESS **Deviation Reporting** Reporting Deadline × FACILITY NAME From: 04/01/2021 Insignificant emission unit that is subject to TITLE V PERMIT requirements shall comply with those TERM NO. Description Part A.19 Each requirements. one or more applicable applicable

2Q2021 Title V Deviation Report 7/30/2021

and had not been monitored

therefore, were not tagged,

LDAR database and

Ohio Environmental Protection Agency	gency		
Deviation Reporting			
FACILITY NAME		BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)		04-48-02-0007	
FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	43616
ssuance or most recent modification date	n date	P0104782 - Renewal effective 08/03/17 (issued 07/13/17)	7 (issued 07/13/17)
QUARTERLY Reporting Period		SEMIANNUAL Reporting Period (please indicate "N/A" below in the fields if this report does not include semiannual deviation reporting)	SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)
From: 04/01/2021	To: 06/30/20201	From: 04/01/2021	To: 06/30/20201
Reporting Deadline		07/30/2021	

(Part B) - Facility-wide Permit Requirement Reporting Insignificant Emissions Unit Negative Declarations (Table 1)

List each insignificant emissions unit where no deviations of any PTI terms or applicable requirements for the listed emissions unit occurred, or add rows as necessary to the deviation reporting table (see next page) for reported deviations (one for each term as applicable; see detailed instructions for more information)

THERE WERE NO DEVIATIONS OF ANY PTI TERMS OR APPLICABLE REQUIREMENTS FOR THE FOLLOWING LISTED INSIGNIFICANT EMISSIONS UNITS IDENTIFIED IN (PART B.28) OF

-002, G001, J008, J009, J011, L001, P030, P034, P038, P046, P047, P052, P061, P062, P064, P066, P067, P802, T042, T043, T048, T095, T112, T117, T121 T141, T145, T148, T149, T151, T159, T163, T168, T168, T172, T173, T191, T196, T197, TMP 196253 THE TITLE V PERMIT:

Deviation Reporting											
FACILITY IN (PREMISE NI IMBER)	(GERD)					BP-Husky Refining LLC					
FACILITY ADDRESS	Calcula					4001 Cedar Point Road, Oregon, OH 43616	Dregon, OH 43616				
Issuance or most recent modification date	odification	date				P0104782 - Renewal effe	P0104782 - Renewal effective 08/03/17 (issued 07/13/17)	17)			
QUARTERLY Reporting Period	eriod		, oc. 00	7000		SEMIANNUAL Reporting	SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include	below in the "From" and "T	o" fields if this report d	ses not include	
From: 04/01/2021			10: 06/30/202	1.0202		From: U4/U1/2021		10: 06/30/2020:1			
Reporting Deadline						07/30/2021					
Facility-wide Permit Requirements Terms and Conditions (Permit Requirement Reporting) - Negative Declarations (mark with an X' if applicable) (Table 2) THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART B OF THE TITLE V PERMIT DURING THE REPORTING P	Terms and	ANY OF TH	(Permit Requirer E TERMS AND CC	ment Reporting ONDITIONS OF	g) - Negative - PART B OF	Declarations (mark with an THE TITLE V PERMIT DU	ide Permit Requirements Terms and Conditions (Permit Requirement Reporting) - Negative Declarations (mark with an 'X' if applicable) (Table 2). THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART B OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT	RIOD SPECIFIED IN THIS F	REPORT		
Part B - Facility-wide and/or IEU permit requirement (Permit Requirement Reporting) - Deviation Reporting (Table 3)	ermit requir	rement (Peri	mit Requirement I	Reporting) - Do	eviation Repo	rting (Table 3)					
Add rows as necessary to the following table for reported deviations (one for each	ng table for	reported de	viations (one for ex	ach Term as ap	oplicable; see	n Term as applicable; see detailed instructions for more information)	re information)				
			METHOD	D	DEVIATION INFORMATION	ORMATION			WAS DEVIATION	MALFUNCTION	Ī
TITLE V PERMIT or IEU PERMIT TERM NO/Description or PTI terms for IEUs	Quarterly	Semi- Annual	USED TO DETERMINE COMPLIANCE	DEVIATION DURATION DATE / TIME DATE / TIME START END	DURATION DATE / TIME END	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	ATTRIBUTABLE TO A MALFUNCTION ? (Yes or No - If Yes, continue to the next	VERBAL REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)
Part B.7the permittee shall at all times comply with the effective rules and complance dates as established by approved extensions, litigation, EPA clarifications, or rule changes as a chicked.						The specific deviations to the deviations are listed in Part of marked "RSR Deviations" for 20,2021 are included in that have duplicative information.	The specific deviations to the requirements effective after Feb 1, 2017 that have deviations are listed in Part C - tbl 2 of this deviation report and have been 202021 "Reviations" for darification. The details of these deviations for 202021 are included in that table and only generally referenced here so as to not have duplicative information.	ter Feb 1, 2017 that have port and have been of these deviations for ferenced here so as to not			
published veriff in the requirements reflected in the language of this permit are different. [Also reported in Part C - tbl 2]	×	×	Various	Various	Various	(Revisions to 40 CFR 63 : promulgated on Decembe Risk and Technology Rev were promulgated on July Refinely velue (RSR) MAC effective through Februan have compliance dates af are only generally referen	(Revisions to 40 CFR 63 Subparts CC and UUU (Refinery MACT I and II) were promulgated on December 1, 2015 as part of EPA's Petroleum Refinery Sector Risk and Technology Review Rule (RSR) and further revisions and clarifications were promulgated on July 73, 2016. The BS-Husky Tille V permit includes the Refinery Rule (RSR) MACT requirements that apply to the refinery and that are effective through February 1, 2017. However, the requirements of the RSR that have compliance dates after February 1, 2017 (and thus are not yet effective) are only generally referenced at the Subpart level in this section of the permit.)	ery MACT I and II) were stroleum Refinery Sector evisions and clarifications to V permit includes the the refinery and that are irements of the RSR that is are not yet effective) is section of the permit.)	2	No Report	No Report
Part B.2 dl/da, dl/5)o. INSPS Subpart VVa as referenced by Subpart GGGa (60.592a(a); and Part 63 Subpart CC: 63.648(a): 40 CFR 60.482-7a(a) through (h)] A valve that begins operation after the initial startup date for the process unit shall be monitored for the end of its startup period, except for a valve that replaces a leaking valve and except as provided in 40 CFR 60.482-7a(f), (g), and (f), 60.482-1a(c), 60.483-1a, and		×	LDAR Program	Various	Various	As part of the annual Process Unit LDAR walk-throughs required by the Consent Decree, there we components discovered as part of an enhanced PSLD 1999 and the Interpolation of PGCS). Reformer 3 (PGCS), BCOT (PO29), ISOC (PO41), SC (BCM III, POSS), MAI (PO21), Cat Poly (PO43), Cutely (PO43), Cat Poly (PO43), Cat Poly (PO43), Cat Poly (PO43), Cat Poly (PO43), The FCCU (PO01), that were not in the LDAR distabase, and therefore, were not tragged and had not been monitored. The specific number of components identified and dates monitoring were completed are included in Part A and Part C - thi 2 this deviation report. They are not repeated here.	As part of the annual Process Unit LDAR walk- throughs required by the Consent Decree, there were components discovered as part of an enhanced P&ID tegging audit in the DIB Tower (POE5). Reformer 3 (P803), BGOT (P029), ISOZ (P041), Sat Sas Unit (P055), Alky (P021), Cat Poly (P043), Gas Unit (P055), Alky (P021), Cat Poly (P043), the FCCU (P007) that were not in the LDAR database, and therefore, were not algosed and had not been monitioned. The specific number of components identified and dates monitoring were completed are included in Part A and Part C - th I 2 of this deviation report. They are not repeated here.	The components were tagged and entered into LeakDAS database upon discovery. They were then monitored in the 2nd quarter of 2021.	2	No Report	No Report

Add rows as necessary to the following table for reported deviations (one for each Term as applicable, see detailed instructions for more information) ACTUAL DEVIATION INFORMATION	ing table for reporte	d deviations (one fo	or each Term as a	applicable; see detailed instru DEVIATION INFORMATION	detailed instructions for n	nore information)				
TITLE V PERMIT or IEU PERMIT TERM NO./Description or PTI terms for IEUs	Quarterly Semi-Annual	1	DEVIATIO DATE / TIM START	DEVIATION DURATION DATE / TIME START END	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - If Yes, continue to the next	MALFUNCTION VERBAL REPORT(S) DATE(S) (if no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)
Part B.2.d)(4)a, d)(5)o. [NSPS Subpart VVa as referenced by Subpart GGGa [60.592a(a); and Part 63 Subpart CC: 63.648(a); 40 CFR 60.482-7a(a) through (h)] A valve that begins operation after the initial startup date for the process unit shall be monitioned for the first time within 30 days after the end of its startup period, except for a valve that replaces a leaking valve and except as provided in 40 CFR 60.482-7a(f), (g), and (f)), 60.482-1a, and 60.483-2a.	×	LDAR Program	m 4/1/2021	5/7/2021	There were a total of (14) untagged component identified in the East Flare Gas Recovery System (AKA Hydrogen Unit) that had not been monitored.	As part of the annual Process Unit LDAR walk-throughs required by the Consent Decree, there were components identified as part of an enhanced P&ID tagging audit in the in the process area known as "Hydrogen Unit" that were and therefore, were not tagged, and had not been monitored	The components were tagged and entered into Leak/AS database upon discovery. The monitoring was completed on 5/7/2021.	2	No Report	No Report
Part B, 2.dJ(5)n. INSPS Subpart VVa as referenced by Subpart GGGa and Part 63 Subpart CC: 40 CFR 60.482-6a]: "Each open- ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482-6a(d) and (e) and 40 CFR 60.482-6a(d) and (e)	×	LDAR Program	m 5/21/2021	5/21/2021	There were two (2) open-ended lines (OELs) visually identified by operations on pump PR#806481; the pump vent and drain had a single isolation valve with open piping/tubing routed to sewer.	Pump vents and drains were designed and installed prior to the current rules being in place. Since this line is a heavy liquid line, it is not frequently monitored by LDAR technicians.	Piping/tubing removed and plugs installed.	Ŷ Ž	No Report	No Report
Part B, 3.a) (1) No later than the start-up of the Coker Gas Plant (P069), the permittee shall install, calibrate, operate, and maintain instrumentation to monitor and instrumentation to monitor and record the concentration by volume (dry basis) of total suffur (expressed as SO2) in the refinery five gas burned in each of the heaters and bollers listed in this permit (except for heaters fring fuel gas from the East Side Mix Drum).	×	Continuous Monitoring System	4/1/2021	6/30/2021	The TIU Mix Drum total sulfur continuous monitoring system was down and not recording data for 96 hours. This was less than 95% of the operation for the Coker 3 furnace.	The Coker 3 furnace outgoe at the beginning of the quarter, therefore, its that operational time for the quarter, was only 1645 hours. The total sulfur analyzer on the TIU Mix Drum experienced approximately 96 hours of downtime during the quarter due to the analyzer failing to complete the required drift resis. Due to the reduced operation of the Coker 3 furnace, the total sulfur of the fuel gas being burned at the Coker 3 furnace, the total sulfur of the Coker 3 furnace, the total sulfur of the Coker 3 furnace, the total sulfur of the Coker 3 furnace was not monitioned for more than 5% of the operational time of the Coker 3 furnace.	The TIU Mix Drum total sulfur analyzer drift test was completed and returned to service on 5/11/2021. The Coder 3 furnace returned to normal operation on 4/20/2021.	ž	No Report	No Report
Other than the deviations listed above (or elsewhere in this report) there were no	ve (or elsewhere in	this report) there we		ions of Part II r	equirements of the Title	other deviations of Part II requirements of the Title V permit and other PTIs incorporated in the Title V permit	orated in the Title V permit.			

SEMIANNUAL Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting) P0104782 - Renewal effective 08/03/17 (issued 07/13/17) To: 06/30/20201 4001 Cedar Point Road, Oregon, OH 43616 BP-Husky Refining LLC From: 04/01/2021 04-48-02-0007 07/30/2021 To: 06/30/20201 Ohio Environmental Protection Agency Issuance or most recent modification date FACILITY ID (PREMISE NUMBER) QUARTERLY Reporting Period Deviation Reporting FACILITY ADDRESS Reporting Deadline From: 04/01/2021 FACILITY NAME

PART C - Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Negative Declarations (Table 1)

List each emissions unit where no deviations of any terms for the listed emissions unit occurred, or add rows as necessary to the second table (see next page) for reported deviations (one for each term as applicable; see detailed instructions for more information) THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS UNITS:

Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
B015	Part C-tbl 2 - H2S Deviations	X
B019	Part C-tbl 2 - H2S Deviations	×
B029	Part C-tbl 2 - H2S Deviations	×
B031	Part C-tbl 2 - H2S Deviations	×
B032	Part C-tbl 2 - H2S Deviations	Part B-tbl 3 - Total sulfur monitoring downtime deviation
B036	×	×
F001	×	×
F005	X	X
F006	X	X
J004	×	×
J005	×	×
P007	Part C-tbl 2 - H2S Deviation; Ammonia Deviation	Part C-tbl 2 & Part B-tbl 3- Monitoring Instrumentation compliance deviation, Part C-tbl 2 and Part B-tbl 3 LDAR
		monitoring deviation
P009	X	×
P010	×	×
P011	×	Part C-tbl 2 & Part B-tbl 3 - LDAR monitoring deviation
P014	×	×
P017 (see Note 2 below)	×	X
P025 (see Note 2 below)	Part C-tbl 2 - NSPS QQQ Deviations	Part C-tbl 2 - NSPS QQQ Deviations
P036 (see Note 2 below)	X	X
P037	×	×
P048	X	X
P053	X	X
P054	×	×

Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
P803	×	Part C-tbl 2 & Part B-tbl 3 - LDAR monitoring deviation
Т047	×	×
Т073	×	×
T102	×	×
T120	×	×
T139	×	×
T164 (see Note 2 below)	×	×
T170 (see Note 2 below)	×	×
T177	×	×
Group B1: B008, B009, B010	×	×
Group B2: B017, B022	Part C-tbl 2 - H2S Deviations	X
Group B3: B030, B033	Part C-tbl 2 - H2S Deviations	×
Group B4: B034, B035	Part C-tbl 2 - H2S Deviations (B035 only)	Part C-tbl 2 - NOX CEMS Linearity Check deviation
Group P1: P021, P022, P023 (see Note 2 below)	×	Part C-tbl 2 & Part B-tbl 3 - LDAR monitoring deviation (P021 only)
Group P2: P028, P029 (see Note 2 below)	×	Part C-tbl 2 & Part B-tbl 3 - LDAR monitoring deviation (P029 only)
Group P3: P041, P043 (see Note 2 below)	Part C-tbl 2 - OEL deviation (P041 only)	Part C-tbl 2 & Part B-tbl 3 - LDAR monitoring deviation
Group P4: P003, P004	Part C-tbl 2 - Loss of pilot Deviation (P004 only), Part C-tbl 2 and Part B-tbl 3 Net Heating Value Deviations	Part C-tbl 2 & Part B-tbl 3 - Continuous monitoring deviation (P003 only); Part C-tbl 2 & Part B-tbl 3 Monitoring Instrumentation compliance deviation and Record keeping deviation
Group P5: P055, P056, P057, P058	×	×
Group P6: P059, P060, P063	×	Part C-tbl 2 & Part B-tbl 3 - LDAR monitoring deviation (P059 only)
Group P7: P044, P045	×	×
Group T1: T078, T080, T081, T082, T086, T087, T088, T092, T100, T107, T108, T109, T110, T111, T175, T176, T182, T183, T184, T190	×	×
Group T2: T113, T114, T115, T116	×	X
Group T3: T089, T153, T154, T155, T156, T157, T161	×	×
Group T4: T010, T011, T012, T013, T014, T051	×	×
Group T5: T045, T046	×	×
Group T6: T019, T084, T174, T187, T188	×	X
Group T7: T016, T017, T019, T020, T021, T024, T025, T026, T027, T028, T029, T030, T031, T032, T033, T034, T035, T036, T037, T038, T039, T040, T041, T044, T059, T060, T085, T090, T091, T096, T097	×	×
Group T8: T465 T467	>	

THERE WERE NO DEVIATIONS OF <u>any</u> of the terms and co	D CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS UNITS:	FOLLOWING LISTED EMISSIONS UNITS:
Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
Group T9: T136, T137, T138	×	×

Notes:
1 - This unit has a vent which is routed to a flare and could potentially experience a deviation.
2 - This unit has a vent which is routed to a flare that experienced a deviation. If the vent was active at that time, it may constitute a deviation for this emission unit.

Deviation	Deviation Reporting FACILITY NAME						BP-Husky Refining LLC					
FACILIT	FACILITY ID (PREMISE NUMBER)							07007				
Suance	FACILITY AUDRESS Issuance or most recent modification date						4001 Cedar Point Road, Oregon, OH 43616 P0104782 - Renewal effective 08/03/17 (issu	n, OH 43616 08/03/17 (issued 07/13/17)		-	1	
ZOAR I	EKLT Keponing Penda						SEMILAININGAL REPORTING PERIO	d (please indicate IV/A below ii	SEMIANNOAL REPOILING PENDA (prease maicate IV.A. below in the From and To Herds II this report does not include semiamulai deviation reporting.	report does not includ	e semiannual deviano	n reporting)
From: 04/01/202	From: 04/01/2021 Reporting Deadline		To: 06/30/2020	1201			From: 04/01/2021			To: 06/30/20201		
(PART C) Emissic	Inspersing December PART C Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)	† Requiremen	nt Reportin	g) - Deviation Re	porting (Table	2)						
THERE Add rows as neces	THERE WERE NO DEVATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT Add rows as necessary to the following table for reported deviations (one for each Term as applicable, see detailed instructions for more information)	HE TERMS AI	ND CONDIT	TIONS OF Section rm as applicable;	C OF THE TIT	OF THE TITLE V PERMIT DURING THE F detailed instructions for more information)	OURING THE REPORTING PERIGE Information)	OD SPECIFIED IN THIS REPO	RT			
EMISSIONS UNIT (EU)	ON MOTO TIMES	Reporting Requirement (choose one or both)	ting t (choose poth)	ACTUAL		DEVI	DEVIATION INFORMATION	aca acada	CORRECTIVE ACTIONS /	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE
NUMBER & DESCRIPTION (See below)	IIIE V PEKMI I EKM NO & DESCRIPTION	Quarterly	Semi- Annual	METHOD USED TO DETERMINE COMPLIANCE	DEVIATION Date / Time Start	DEVIATION DURATION ate / Time	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	THE DEVIATION	PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No - If Yes, continue to the next column)	(If no reports were made, state "NO REPORTS" in the space below)	(If no reports were made, state "NO REPORTS" in the space below)
P025 - Refinery VNVT System	Citation: P025 Part C.18.b)(1). The redirinenty shall comply with the requirements of NSPS 20.00-L40. CRR 60.692-3(e)] - Slop oil from an oil-water separator tank and oily wastewater from slop ool Ihandling equipment shall be collected, stored, transported, recycled, reused, or disposed of in an enfolded stored, of in an enfolded stored. Part C.18.c)(3)(e)-[\$60.692-2(a)] - Each drain shall be equipped with a water seal.	×		Program Audit	4/22/2020	6/30/2021	The oily wastewater from slop for handling equipment, tanks 79 and 697 are not collected, stored, transported, recycled, transported, recycled, respectively of an an enclosed individual drain system. (previously reported)	These drains were previously interpreted to be exempt because they were installed because they were installed audit was conducted in late 2019 per the Consent Decree at the BH refinenty. This audit found that these drains should be part of the "Slop oil management system" since they are used for dewatering the slop oil tanks, and therefore the drains should be controlled.	A compliance plan was developed for the findings from the QQQ Audit and was submitted to TDES on July 21, 2020. Per this plan, the audit finding for these drains was to to becrowing a final deviation. The verification for these drains was completed on July 21, 2020, and the two drains are scheduled to be upgraded with water seals by December 31, 2021.	2	No Report	No Report
P025 - Refinery WWT System	Citation: P025: Part C.18.b/(1), b)(2)j.i and ii: [40 CFR 60.690(a)(1)] The provisions of Subpart QoLQ apply to affected facilities located in petroleum refinences for which construction, modification, or reconstruction, modification, or reconstruction, modification, or aconstruction, modification, or seconstruction, and [19.6]; [\$60.692-2]; [\$60.692-2] and equipped with water seal controls. If a drain is in active sevice, water seal controls, and active service water seal controls shall be checked by visual or physical inspection monthly.	×	×	Program Audit	4/22/2020	6/30/2021	One area drain and three hub drains in the NHT Feed and Desalter area were not controlled with water seals and have not been monitored pursuant to NSPS QQQ requirements. (previously reported)	An NSPS QQQ audit was conducted in late 2019 per the Consent Decree at the BPH refinery. This audit found that BPH inadventently missed induding one area drain and three hub drains in the NHT Feed and Desalter area in the Ferieny NBS QQQ Management Program when junction boxes (manibles) were modified for TFQ project.	A compliance plan was developed for the findings from the QQQ Audit and was submitted to TDES on July 21, 2020. Per this plan, the audit finding for these drains was to be reviewed and verified prior to becoming a find deviation. The verification for these drains was completed on September 30, 2020. The drains are scheduled to be upgraded with water seals by December 31, 2021.	ž	No Report	No Report
P025 - Refinery WWT System	Citation: P025: Part C;18.b)(1), b)(2)j.i and ii: [40 CFR 60.690(a)(1)] The provisions of Subpart Qo.D apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction, modification, or reconstruction, modification, or teconstruction, modification, or sensoristruction, and [19.6]; [\$60.692-2]; [\$60.692-2] and rain subject to 40 CFR 60.692-2 shall equipped with water seal controls. If a drain is in active sevice, water seal controls shall be checked by visual or physical inspection monthly.	×	×	Program Audit	4/22/2020	6/30/2021	Two areas drains, twelve hub drains, and three catch basins in the Hydrogen Unit area where not concluded with water monitored bursuant to NSPS QQQ requirements. (previously reported)	An NSPS QQQ audit was conducted in late 2019 per the Consent Decree at the BPH femely. This audit found that BPH inadvartently audit found that BPH inadvartently missed including two area drain, whelve hub drains, and three catch basins in the Valvogen area in the refinery NSPS QQQ Management Program when junction boxes (manholes) were modified for the Flare Gas and Recovery Treating Project.	A compliance plan was developed for the findings from the QQQ Audit and was 2 bubmitted to TDES on July 21, 2020. Per this plan, the audit finding for this equipment was to revewed and verified prior to becoming a final deviation. The verification for these drains was completed on December 31, 2020. The upgrades are scheduled to be completed by December 31, 2020.	ĝ	No Report	No Report

WAS DEVIATION MALFUNCTION MALFUNCTION	(If no reports were made, state "NO	OF THE DEVIATION column) space below) space below)	An NSPS QQQ audit was conducted in late 2019 per the Consent Decree at the BPH refined to the findings from the 2015 Applicability dean-outs, ten catch basins, four the 2015 Applicability and finding for this gen unamples that were part of the 1993 Benzene Stripper project were not designed to meet the previously transfined the 1993 finding for this equipment was incorrect. The 14 drain place on these drains was completed on hubs, 4 dean-outs, 10 catch (previously reported) installed as part of the Benzene Stripper project are subject to the requirements of NSPS QQQ. No Report No Report No Report No Report No Report No Report (previously reported) installed as part of the Benzene Stripper project are subject to the requirements of NSPS QQQ.	There were four (4) slop oil that skim oil inspection port when yours located on the primary permay panel work of designed permay panel QOD panels channel Word Danels when the seals on view port panels. This of the WMXTU are not seled with adequate seals when the issue is ongoing and BPH will to prevent emissions to to comply with NSPS QQQ when available.	This deviation was first identified in 102020 for two fare gas flow meters. A capital project is planned to update these flow meters and bring. The refinery sector rule them into compliance. BPH is updated 40 CFR 83 Subpart (CC requirements in 2015 to instrumentation in the instrumentation requirements. After the flow meters were hydrocarbon flare system that implementing their plan to going investigation to identified. BPH bagan an onderstand the pressure and they have operated, additional deficiencies pursuant to MACT flare instrumentation has considerable and that does not in to compliance and as often instrumentation has pressure and meet the MACT CC - Table flow meters to detarmine if a flow meters to detarmine
DEVI	DEVIATION	Date / Time Date / Time Start End	4/22/2020 6/30/2021	s 5/26/2021 6/30/2021	1/31/2020 6/30/2021
Peporting			Program Audit	Visual Inspections	Continuous Parameter Monitoring System (CPMSs)
Reporting Requirement (choose one or both)	Semi	Annual	×		×
	DESCRIPTION	מחשונהו	Citation: PD25: Part C.18.b)(1), b)(2)j, and ii: [40 CFR 60.690(a)(1)] In pervisions of Subpart GQQ apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction, modification, at 1887 Part C.18.c)(3)(c), d)(5)(c); [§60.692-2 Z[a]). Each drain subject to 40 CFR 60.692-2 shall equipped with water sear action or active sear or active sear or active service, water seal controls shall be checked by visual or physical inspection monthly.	Citation: P025: Part C.18.c)(3)h. [40 CFR 60.592-3(a)] Each oil-water separator tank, slop oil Each sorial sessel, or other auxiliary equipment subject to the requirements of 40 CFR 60 Subpart QCQ shall be exupped and operated with a fixed roof, which meats the following specifications, except as provided in 40 CFR 60.692-3(d) or in 40 CFR 60.692-2.	Citation: P003/P004: Part C.40.d)(2) The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63. Subpart CC: [Note: there is not a specific Title V reference to the following requirement] 440 CFR 63 Subpart CC; 40 CFR 63.47(4)] For each CDMS installed to comply with applicable provisions in §63.670, the owner or operator shall install, operate, calibrate, and maintain the CPMS as specified in paragraphs (a)(1) through (6) of this section. (1) Except for CPMS installed for pilot flame monitoring, all monitoring equipment must meet the applicable equipment must meet the applicable minimum accuracy, calibration and
EMISSIONS UNIT (EU)	NUMBER & DESCRIPTION	(See below)	P025 - Refinery PVWIT System P	P025 - Refinery PWMT System P	P003/ P004 - P03/ P004 - P003/ P004 - P003/ P004 - P003/ P004 - P003/ P0

	MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report	No Report
	MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report	No Report
		MALFUNCTION? (Yes or No - If Yes, continue to the next column)	ž	Š	2°
RT	CORRECTIVE ACTIONS /	PREVENTATIVE MEASURES TAKEN	Coker rates were reduced to proper reduced to produced the flooding in the bulk amine contactor. This amine contactor. This the carryover and the TIU Mix Drum gas was brought into compliance	The pilots were manually ignited. Operations drained the remaining condensate from the line using bleeds.	The pilots were manually ignited. Operations was able to dry the steam out utilizing bedes and manupulating the ring and center steam valves. Bleeds will remain open work package is developed and implemented.
OD SPECIFIED IN THIS REPO	DBORARI FOALIGE FOB	THE DEVIATION	An upset in the coker gas plant resulted in amine according to the TIU Mix Drum. This carryover resulted in high H ₂ S material being sent to the TIU Mix Drum and causing an exceedance of the 162 ppm H ₂ S 3-hour average limit.	The refinery believes the outage was due to low steam flow that caused condensate to build up in the steam system and put out the pilots. No flaring was occurring at the time, all refinery gas was being recovered in the flare gas recovery system.	The refinery believes the outage was due to low steam flow that caused condensate to build up in the steam system and put out the pilots. No flaring was occurring at the time, all refinery gas was being recovered in the flare gas recovery system.
JRING THE REPORTING PERIOR Information)	TION IATION	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	H ₂ S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of average basis for a total of exceedances from the TIU Mix Drum.	The West Flare lost all pilot flames for 19 minutes	The West Flare lost all pilot flames for 5 minutes
E V PERMIT DI uctions for mon	DEVIATION INFORMATION	OURATION Date / Time End	5/4/21 at 14:00 hours	4/15/2021 at 15:58 hours	5/5/21 at 23:13 hours
C OF THE TITL		DEVIATION DURATION Date / Time	5/4/21 at 11:00 hours	4/19/2021 at 15:37 hours	5/5/21 at 23:08 hours
FIONS OF Section	ACTUAL	TO DETERMINE COMPLIANCE	Continuous Monitoring System (CEMS)	Continuous Parameter Monitoring System (CPMSs)	Continuous Parameter Monitoring System (CPMSs)
AND CONDITION TO THE FOR THE TO THE T	Reporting Requirement (choose one or both)	Semi- Annual			
HE TERMS eviations (o	Requireme one o	Quarterly	×	×	×
THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)	TITI E V DEDMIT TEDM NO &	DESCRIPTION	citations: B015. Part C.1.b) (2)a., b)(2)b., c)(2), f)(1)a.; B019. Part C.2.b)(2)b., c)(2), f)(1)c.; B031. Part C.4.b) (2)b., c)(2), f)(1)f.; B032. Part C.5.b)(2)d., c)(2), f)(1)j.; B017 and B022. Part C.3.b) (2)b., f)(1)j.; B031. Part C.3.b)(2)e., p)(2)a. and f)(1)j.; B029. Part C.3.b)(2)e., p)(3)a. and f)(1)j.; B029. Part C.3.b)(1)j.; B035. Part C.3.b)(1)j.; B037. Part C.3.b)(1)j	Citation: P004: Part C.40.b)(1)c., b)(11d., b)(11d., b)(11d., b)(11d., c)(11f.; P009: Part C.13b)(2k., pp.17: Part C.14b)(2b., C.17.b)(2h., C.14.b)(2h., C.17.b)(2h., C.18.c)(2h., T164: Part C.19.b)(2b., C.19.c)(2b., T164: Part C.30.b)(2b., C.30.c)(10,, T170: Part C.31.b)(2b., C.30.c)(11), T170: Part C.31.b)(2b., C.30.c)(11b., C.37.b)(2b., C.30.c)(2b., C.	Citation: P004: Part C.40.b)(1)c., b)(1)d., b)(1)d., b)(1)d., c)(1)f., p009: Part C.13.b)(2)k., p017: Part C.13.b)(2)k., p017: Part C.13.b)(2)k., p017: Part C.14.b)(2)c., C.18.b)(1)d., c.18.b)(3)c., C.18.c)(3)d., p028: Part C.30.b)(2)b., c.30.c)(1)d., p021: Part C.30.b)(2)b., c.30.c)(1)d., p021: Part C.30.b)(2)b., C.31.b)(2)b., C.37.b)(2)c., p041; p022. p023: Part C.33.b)(2)c., p041; p043: Part C.33.b)(2)c., p041; p043: Part C.33.b)(2)d., p041; p043;
Add rows as neces	EMISSIONS UNIT (EU)	NUMBER & DESCRIPTION (See below)	B015 - Crude 1 Coker 2 Furnace; B019 - Crude Nac 2 Furnace; B022 - Naphtha Treater Furnace; B030 - DHT-B Train Furnace; B031 - Vac 1 Furnace; B032 - Coker 3 Furnace; B035 - Furnace; B035 - West Alstom Boiler B029 - DHT A- Train Furnace; B030 - Coker 3 Furnace; B035 - Furnace; B035 - Fu	P004 - West Hydrocarbon Flare	P004 - West Hydrocarbon Flare

Add rows as nece	THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)	Viations (one	ND CONU	TIONS OF Section Frm as applicable;	see detailed inst	LE V PEKMII L	OURING THE REPORTING PERI re information)	OD SPECIFIED IN 1 HIS REPORT	۲۲			
EMISSIONS UNIT (EU)	TITLE V DEDMIT TEDM NO. 2	Reporting Requirement (choose one or both)	ting t (choose coth)	ACTUAL		DEVI. INFOR	DEVIATION INFORMATION	A PORABILE CALISE FOR	CORRECTIVE ACTIONS/		MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE
NUMBER & DESCRIPTION (See below)	DESCRIPTION	Quarterly	Semi- Annual	TO DETERMINE COMPLIANCE	Date / Time Date / Tim	DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	THE DEVIATION	PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No - If Yes, continue to the next column)	(If no reports were made, state "NO REPORTS" in the space below)	(If no reports were made, state "NO REPORTS" in the space below)
P003 - East Hydrocarbon Flare	Citation: P003: Part C.40.b(1), c)(1) [40 CFR 63 Subpart CC; [40 CFR 63 Subpart CC], [40 CFR 63 Subpart CC] and and after January 30, 2019, she capared and an equirements of §63.670 shall be met. [40 CFR 63.700][50] Except as provided in paragraphs (j.)6 and (§) of this section, the owner or operator shall install, operate, additionated and antition and conditions. [Also reported in Part B-tbl 3 - RSR Deviation]		×	Continuous Parameter Monitoring System (CPMSs)	5/9/2021 at 15:15 hours	5/9/2021 at 18:15 hours	The net heating value of the flare was unable to be measured on a 15-minute clock quadrant basis for thirten (13) 15-minute blocks.	The refinery experienced an object at the ISO out when the ISO 69 kV transformer tripped off due to an electrical fault. As a result of the trip, power was lost to the East side instrumentation used to monitor and measure the net hearing value on the East Flare.	The electrical fault was fixed and power was restored to the instrumentation so that the net heating value could be continuously monitored.	2 2	No Report	No Report
P003 - East Hydrocarbon Flare	Citation: P003: Part C.40.b(1)f, b)(2)c. d)(4)k [40 CFR 60 Subpart Ja; [40 CFR 60.407a[a](2)]) A flare that is subject to the H2S concentration requirement in 40 CFR 60.103a(h) shall install, operate, calibrate and maintain an instrument and recording the concentration by volume (dry basis) of H2S in the fuel gases before being burned in a flare. [Also reported in Part B-tb] 3 - RSR Deviation]		×	Continuous Parameter Monitoring System (CPMSs)	5/9/2021 at 15:15 hours	5/9/2021 at 18:15 hours	The continuous emissions monitor for continuously monitoring and recording the concentration of H ₂ S in the gases being flared was not in continuous operation.	The refinery experienced an upset at the ISO unit when the ISO BV kV transformer tripped off due to an electrical fault. As a result of the trip, power missurumentation used to monitor and measure the net heating value on the East Flare.	The electrical fault was fixed and power was restored to the are structurentation so that the net heating value could be continuously monitored.	S _Z	No Report	No Report
P003 - East Hydrocarbon Flare	Citation: P003: Part C.40.b(1)f, b)(2)c. d)(4)t [40 CFR 60 Subpart Ja; [40 CFR 60.1074e](1)]] Total reduced sulfur (TRS) monitoring requirements. The permittee shall install, operate, calibrate and manitain an instrument or instruments for continuously monitoring and reconfiging the concentration of total reduced sulfur in gas discharged to the flare. [Also reported in Part B-tb] 3 - RSR Deviation]		×	Continuous Parameter Monitoring System (CPMSs)	5/9/2021 at 15:15 hours	5/9/2021 at 18:15 hours	The continuous emissions monitor for continuously monitoring and recording the concentration of total reduced sulfur in the gases being flared was not in continuous operation.	The refinery experienced an upset at the ISO unit when the ISO ob kV transformer tripped off due to an electrical fault. As a result of the trip, power instrumentation used to monitor and measure the ret monitor and measure the ret heating value on the East Flare.	The electrical fault was fixed and power was restored to the transformentation so that the net heating value could be continuously monitored.	ž	No Report	No Report

	MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)		No Report
ŀ		(If no reports were made, state "NO transfer the space below)		No Report
	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION? (Yes or No - If Yes, continue to the next column)		2
	CORRECTIVE ACTIONS /	PREVENTATIVE MEASURES TAKEN		When the flaring event ended, the heating value returned to an acceptable value.
	AND TO A TREE FOR	THE DEVIATION	During the last 15-min block of the flating event it was s	algovovered trath the amount of ming steam was not adjusted to accommodate the decrease in verifical as as the flare event was ending, which caused the heating value to drop.
Add rows as necessary to the following table for reported deviations (one for each erm as applicable; see detailed instructions for more information)	NOIT	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	The net heating value of the of the was measured to be of RTHISCF on a 15.	sis, Iuired aring
וו מכווכוו וכו בווכווכוו	DEVIATION INFORMATION	DEVIATION DURATION ate / Time	± ₩ 8	5/9/2021 at m. 18:30 hours W 22 22 ev
				5/9/2021 at 18:15 hours
ACTUAL METHOD USED TO DETERMINE COMPLIANCE		TO DETERMINE COMPLIANCE		Continuous Parameter Monitoring System (CPMSs)
Reporting Requirement (choose	one or both)	Quarterly Semi-		×
ž	TITI E V BERMIT TERM NO &		Citation: P004: Part C.40.d1(2) [40 CFR 63.64(a)(2)] Note: there is not a specific Title V reference to the following requirementy [40 CFR 63.64(a)(2)] Where a flare is used on and after January 30, 2019, the requirements of §63.50 shall be met fand CFR 83.67(b) shall be met fand CFR 83.67(b) shall be met fand CFR 83.67(b) shall be	fare, the owner or operator shall me. The owner or operator shall operate the flare to maintain the net heating value of flare countstion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Bluxcs) determined on a f5-minute block period basis when regulated material is routed to the flare for at least 15-minutes. Also reported in Part B-tbl 3 - R-SR Deviation]
	EMISSIONS UNIT (EU)	NUMBER & DESCRIPTION (See below)	0 C C C C C C C C C C C C C C C C C C C	Poo4 - West flar Hydrocarbon opp Hare paga ga ga ga ga (B) (B) (B) (B) (B)

1 1		ts were (If no reports were te "NO made, state "NO "in the REPORTS" in the elow)	port. No Report	port No Report	port No Report
1 1		N? (If no reports were fes, made, state "NO next REPORTS" in the space below)	No Report	No Report	No Report
í	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION? (Yes or No - If Yes, continue to the next column)	2	2	o Z
	CORRECTIVE ACTIONS /	PREVENTATIVE MEASURES TAKEN	A Capital Project has been initiated to confirm all of the Table 41 requirements for two flow meters in FCOU used for compliance for MACT UUU. It is expected that any equipment identified that is out of compliance will be replaced during the scheduled for the 2022 FCO Unit Turnaround. In addition, BPH will review the requirements for the temperature and pressure sensor associated with the flow meters for compliance and brought into compliance and brought into compliance and brought into compliance and brought into compliance of any deficiencies are discovered.	The urea injection rate was adjusted until compliance was demonstrated. Engineering has been closely working with operations to maintain the urea injection rate as to not have ammonia "sip" above the 20 provid limit based on preliminary information gathered during the May 2021 state test. Bell P plans to conduct another engineering study to produce urea injection operation targets at different boller firing scenarios in the future.	Piping/tubing removed and plugs installed.
	a ca a c	THE DEVIATION	The Refinery Sector Rule (RSR) modifications to MACT UUU require additional accuracy and maintenance requirements of certain FCCU process instrumentation. BP discovered some instrumentation not originally included for MACT UUU compliance.	The CO Boiler was down for planned tube maintenance and it is believed that after start-up of the boiler and the urea injection system which began on 10,222020, the ammonia "slip" exceeded the 20 ppmvd limit. The previous engineering study conducted during the 2019 stack test may not have anticipated all of the different boiler operating scenarios (i.e. ratio of FCC Regen Gas to Fuel Gas on Natural Gas); therefore, injection rates based on past operatings did not maintain compliance.	Pump vents and drains were designed and installed prior to the current rules being in place. Since this line is a heavy liquid line, it is not frequently monitored by LDAR technicians.
re information)	DEVIATION INFORMATION	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	FCCU Instrumentation used to demonstrate compliance may not be in compliance with all the installation, operation and maintenance requirements of MACT ULU Table 41. (previously reported)	While setting up to conduct an ammonia compliance test on 5/20/2021, the CO Boiler ammonia "slip" exceeded the 20 ppmvd limit.	There were two (2) open- ended lines (OELs) visually identified by operations on pump PR#606481; the pump vent and drain had a single isolation valve with open piping/tubing routed to sewer.
THERE WERE NO DEVIATIONS OF ANY OF THE TEXNS AND COVALIDINS OF Section C.O.F. THE THE VERYOR THING FERIOUS SPECIFICIBINI THIS REPORT Add rows as necessary to the following table for reported deviations (one for our Term as applicable; see detailed instructions for more information) Reporting Reporting DEVIATION	DEVI	DEVIATION DURATION ate / Time Start End	6/30/2021	5/20/2021	5/21/2021
		DEVIATION Date / Time Start	1/1/2019	10/22/2020	5/21/2021
	ACTUAL	TO DETERMINE COMPLIANCE	Continuous Parameter Monitoring System (CPMSs)	Stack testing	LDAR Monitoring
ne for each	Reporting Requirement (choose one or both)	Semi- Annual	×		×
eviations (or Repo	Requirements	Quarterly		×	
ssary to the following table for reported d	ON MODEL TIMODO V DIFFE	DESCRIPTION	Citation: P007, Part C.12. d)(17)(i) (40 CFR 85 subpart UUU; (53.1572(c)(1)) You must install, operate, and manitain each continuous parameter monitoring system according to the requirements in Table 41 of this subpart which include requirements regarding accuracy, calibrations and inspection/checks, [Also reported in Part B-tbl 3 - RSSR Deviation]	citation: P007 12.b)(1)a, b)(2)a), f)(1)(h) Ammonia emissions shall not exceed 20 parts per million by volume dry basis.	Citation P041; Part C.39.b)(1)a., d., [In accordance with 40 CFR 63.640(c)(4) and 63.648(a)(1), this emissions unit has equipment in organic HAP service and is subject to the Refinery MACT LDAR program.] [Also reported in Part B-tbl 3]
Add rows as nece	EMISSIONS UNIT (EU)	NUMBER & DESCRIPTION (See below)	P007 (FCCU / CO Boller)	Poo7 (FCCU / CO Boiler)	P041 - Isocracker 2

MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report
MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state "NO REPORTS" in the space below)	No Report	No Report
	MALFUNCTION? (Yes or No - If Yes, continue to the next column)	ž	Š
CORRECTIVE ACTIONS /	PREVENTATIVE MEASURES TAKEN	Honeywell was contacted to remark this issue. The snapshots were restored on June 9, 2021, and photographic evidence of the continuous video surveillance was available for the rest of the quarter.	Once BPH determined this had been missed, the linearity check was completed as soon as possible.
	THE DEVIATION	The server that creates the snapshots from the flare video cameras stopped functioning in February.	The linearity check for the NOx continuous monitoring system was required to be completed prior to May 1, 2021. The instrumentation to department responsible for completing the linearity test had multiple people on medical leave in April and it was inadvertently missed.
e information) TION AATION	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	Photographic snapshots of the ordinuous records of the video surveillance camera to verify visible emissions from the flares were not available from February 21, 2021 until June 9, 2021. The video cameras were working and being used by operations to determine if visible emissions were occurring.	The linearity check for the NOx continuous monitoring system on the West Alstom Boller, as required by Part 75 and the feriency's Part 75 and the artifering's Part 75 and the was not completed during the appropriate time
uctions for more inform DEVIATION INFORMATION	OURATION Date / Time End	6/9/2021	5/13/2021
ee detailed instr	DEVIATION DURATION Date / Time	2/21/2021	5/1/2021
ACTUAL	TO DETERMINE COMPLIANCE	Continuous video surveillance for visible emissions from flare	Continuous Emissions Monitor Quality Assurance Plan
viations (one for each - Reporting Requirement (choose one or both)	Semi- Annual	×	×
Requireme one o	Quarterly		
Add rows as necessary to the following table for reported deviations (one for each Term as applicable, see detailed instructions for more information) Reporting ACTUAL ACTUAL	DESCRIPTION	Citation: P003/P004: Part C.40.d/(2) The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC; [Note: there is not a specific Title V reference to the following requirement] [40 CFR 63 Subpart CC; A0 CFR 63.5.0 Plant CC; 40 C	Citation: B034/B035: Part C.36.b/(2)h The permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NOx monitoring system, designed to ensure continuous valid and representative readings of NOX emissions in units of the applicable standard(s) The plan shall include the requirement to conduct linearity checks pursuant to 40 CFR Part 75.
Add rows as neces EMISSIONS UNIT (EU)	NUMBER & DESCRIPTION (See below)	P003/ P004 - East and West Hydrocarbon Flare	B035 - West Alstom Boilers

H			space below)	No Report	No Report	No Report	
ACITONIE	MALFUNCTION VERBAL REPORT DATE		REPORTS" in the space below)	No Report	No Report	No Report	
MOLEVING GAMA	WAS DEVIATION ATTRIBUTABLE TO A	(Yes or No - If Yes,	continue to the next column)	2	2	o Z	
	CORRECTIVE ACTIONS /	PREVENTATIVE MEASURES TAKEN		Once BPH determined that the check had been misted, they completed the linearity check on May 13, 2021. However, at that time, the East Alsom maintenance. Upon further review, the QA/QC plan for the NOx analyzer indicates the Doiler needs to be online for Part 75 completed. When a linearity test is completed. The When this was discovered, the linearity test on the East Alsom Boller NOx analyzer was completed again on June 5, 2021, while the East Alsom Boller NOx analyzer was	The components were tagged and entered into LeakDAS adabase upon discovery. The monitoring was completed on 6/14/2021.	The components were tagged and entered into LeakDAS database upon discovery. The monitoring was completed on 4/19/2021.	
	90000	THE DEVIATION		The linearity check for the NOx continuous monitoring system was required to be completed prior to May 1, 2021. The instrumentation department responsible to complete the linearity test had multiple people out in April on medical leave and it was inadvertently missed.	As part of the annual Process Unit LDAR walk-throughs required by the Consent Decree, there were components identified as part of an enhanced PLBD tagging audit in the CrudeNac 1 Unit that were not in the LDAR that was and therefore, were not tagged, and had not been monitored.	As part of the annual Process Intel LDAR water-throughs required by the Consent Decree, there were components identified as part of an enhanced Pall bagging audit in the Reformer 3 Unit atta were not in the LDAR database and therefore, were not tagged, and had not been monitored	
re information)	DEVIA IION NFORMATION	DESCRIPTION AND	OF THE DEVIATION	The linearity check for the NOx continuous monitoring system on the East Alstom Boller, as required by Part 75 and the refinery's Part 75 QA/QC plan, was not completed during the appropriate timeframe.	There were a total of (43) untagged component identified in the Crude/Vac(†P011) unit that had not been monitored.	There were a total of (139) untagged component identified in the Reformer 3 (P803) unit that had not been monitored.	
e detailed instructions for more information)	INFORM	INFORMATION	DURATION	Date / Time End	7/20/2021 (East Boiler)	6/14/2021	4/15/2021
see detailed inst		DEVIATION DURATION	Date / Time Start	5/1/2021	4/1/2021	4/1/2021	
erm as applicable;	ACTUAL METHOD USED TO DETERMINE			Continuous Emissions Monitor Quality Assurance Plan	LDAR Monitoring	LDAR Program	
one ror each	Reporting Requirement (choose one or both)	Semi	`	×	×	×	
as necessary to the following table for reported deviations (one for each Term as applicable; see	Requirems one o		f t t	he ent	7. 1. 10 m		
Add rows as necessary to the following table for reported deviations for more information).	S ON MODE THE SOUND S	DESCRIPTION		Citation: B034/B035: Part C.36.b/(2)h The permittee shall develop and maintain a writen quality assurance/quality control plan for the confinuous NOx monitoring system, designed to ensure confinuous valid and representative readings of NOX emissions in units of the applicable standard(s) The plan shall include the requirement to conduct linearity checks pursuant to	Citation: PO11 Part C.(15.b)(1)g., b)(2), b)(2), b)(2)d.,	Citation: P803 Part C.24.b)(1)d., g., and j., lad CFR 83 Subpart GG, 40 CFR 80 Suppart GGG91 The permittee shall comply with the requirements in 40 CFR Part 80, Subpart GGG9 for applicable equipment leak provisions referencing 40 CFR Part 80, Subpart V9. Subpart GGG9 and population in the strong strain of the strong strong strain of the strong stro	
Add rows as neces	EMISSIONS UNIT (EU)	NUMBER & DESCRIPTION	(See below)	B034 - East Alstom Bollers	P011 (Crude/Vac 1)	P803 (Ref 3 Unit)	

Add rows as nece	THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)	Viations (one	ND CONDI	TIONS OF Section	see detailed inst	LE V PERMIT E	URING THE REPORTING PERING PER	OD SPECIFIED IN THIS REPOR	ZT			
EMISSIONS UNIT (EU)		Reporting Requirement (choose one or both)	ting it (choose both)	ACTUAL		DEVIATION INFORMATIO	DEVIATION INFORMATION		CORRECTIVE ACTIONS/	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE
NUMBER &	TITLE V PERMIT TERM NO & DESCRIPTION			METHOD USED TO DETERMINE	DEVIATION DURATION	DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE MEASURES	MALFUNCTION? (Yes or No - If Yes.	(If no reports were made, state "NO	(If no reports were made, state "NO
(See below)		Quarterly	Annual	COMPLIANCE	Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION			continue to the next column)	REPORTS" in the space below)	REPORTS" in the space below)
P043 (Cat Poly)	Citation: P043 Part C, 33.b)(1)a,, d, and f, b)(2)e and b)(2)e [Note: These citations refer to Subpart Cc and NSPS GGG for LDAR requirements. This Unit currently compiles through NSPS GGG a even though the language is not currently in the Tifle VJ language is not currently in accordance with 40 CFR and as 5.44(b)(2) of Subpart CCR as equired to the provisions of both 40 CFR Part 69. Subpart GGG and 40 CFR Part 63. Subpart GGB and 40 CFR Part 63. Subpart GGB and 40 CFR Part 64. Subpart GGB and 40 CFR Part 65. Subpart GGB and 40 CFR Part 64. Subpart GGG and 40 CFR Part 65. Subpart GGG and 40 CFR Part 69. Subpart GGG and 40 CFR Part 69. Subpart GGGB and 40 CFR Part 69.		×	LDAR Program	4/1/2021	5/24/2021	There were a total of (21) untagged component identified in the Cat Poly (PQ43) unit that had not been monitored.	As part of the annual Process Unit LDAR walk-throughs required by the Consent components identified as part of an enhanced P&ID tagging audit in the Cat Poy Unit that were not in the LDAR database and therefore, were not tagged, and had not been monitored.	The components were tagged and entered into LaakDAS database upon discovery. The monitoring was completed on 5/24/2021.	2	No Report	No Report
P029 (BGOT Unit)	Citation: P029 Part C. 38.b)(1)b., d, and h. b)(2)d and b)(2)i In accordance with 40 CFR 83.640(p)(2) of Subpart CC, equipment leaks that are subject to the y provisions of both 40 CFR Part 60, Subpart GGas and 40 CFR Part 63, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGs. [Also reported as a Part B-tb] 3]		×	LDAR Program	4/1/2021	4/26/2021	There were a total of (45) untagged component identified in the BGOT (P029) unit that had not been monitored.	As part of the annual Process Unit LDAR walk-throughs equived by the Consent Decree, there were components identified as part and an enhanced PalD tagging audit in the BGOT Unit that were not in the LDAR that adabase and therefore, were not tagged, and had not been monitored.	The components were tagged and entered into LeakDAS and entered in 4/26/2021.	ž	No Report	No Report
Poo7 (FCC & CO Boller)	Citation: P007 Part C. 12.b)(1)h., i, and n. b)(2)p In accordance with 40 CFR 63.64(p)(2) of Subpart CC, equipment leaks that are subject to the provisions of both 40 CFR Part 60, Subpart GGGa and 40 CFR Part 60, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa. [Also reported as a Part B-tbl 3]		×	LDAR Program	4/1/2021	6/29/2021	There were a total of (23) untagged component identified in the FCCU (P007) unit that had not been monitored.	As part of the annual Process Unit LDAR walk-throughs equived by the Consent Decree, there were components identified as part of an enhanced PalD tagging audit in the FCC Unit that were not in the LDAR detabase and therefore, were not tagged, and had not been monitored.	The components were tagged and entered into LeakDAS and entered into le	⁹ Z	No Report	No Report

Des Gillen

President

BP-Husky Refining LLC Phone: (567) 698-4529

Email: des.gillen@bp.com www.bp.com





BP-Husky Refining LLC P.O. Box 696 Toledo, Ohio 43697-0696

Switchboard: (419) 698-6400 Fax: (419) 698-6361

April 29, 2021

City of Toledo Division of Environmental Services 348 S. Erie Street Toledo, OH 43604

Attn.: Mr. Peter Park

RE: 2020 Title V Permit Annual Compliance Certification

For the Period January 1, 2020 through December 31, 2020

BP-Husky Refining LLC, Facility ID: 04-48-02-0007

Dear Mr. Park:

This letter and its attachments represent the Annual Certification of Compliance for the BP-Husky Refining LLC (BP-Husky) Title V Permit for the operating period January 1, 2020 through December 31, 2020. The Title V Permit (P0104782) was renewed and issued on July 13, 2017 and became effective on August 3, 2017. This Annual Compliance Certification report and its attachments address all federally enforceable emissions limitations, standards and work practices in the BP-Husky refinery's Title V Permit (P0104782). The requirement for this certification is outlined in the General Terms and Conditions in the Title V Permit (P0104782), Part A, Condition 13.d.

Attachment A explains the approach and nomenclature that BP-Husky has used in preparing this report.

Attachment B provides a tabulation of all known Title V deviations that occurred between January 1 through December 31, 2020, for the terms and conditions of the Title V Permit (P0104782), issued on July 13, 2017. Attachment B includes separate tables of deviations for Parts A, B and C of the permit. The tables in Attachment B follow the general format of the forms that Ohio EPA has provided for this purpose. This is the same general format that has been used in reporting annual certification in prior years from 2007 to 2019. The certification has been prepared following OEPA's guidance issued in 2006 that only permit conditions with actual deviations should be reported. Table C also includes a known deviation to the permit to install (PTI) terms and conditions for which a Title V Minor Permit Modification had been submitted, but had not yet been incorporated into this Title V.

In early 2021, BP-Husky completed an internal audit of its requirements that became applicable due to the revisions to 40 CFR 63 Subparts CC and UUU (Refinery MACT I and II) as part of EPA's Petroleum Refinery Sector Risk and Technology Review Rule (RSR). During this audit, it was discovered that fourteen (14) external floating roof (EFR) tanks subject to the 40 CFR 63 Subpart CC requirements for Group 1 storage tanks did not comply with all of the inspection requirements of 40 CFR 63 Subpart WW, which is referenced in 40 CFR 63.646 of Subpart CC. The regulatory citation for the missed inspection requirements is:

[40 CFR 63.1063(c)(2)(iii)] EFRs shall be inspected each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the EFR shall be inspected as specified in 63.1063(d)(1).

Specifically - 40 CFR 63.1063(d)(1)(iii) requires that the permittee inspect ... Floating roof deck, deck fittings, or rim seals that are not functioning as designed (as specified in paragraph (a) of this section

The 14 Group 1 EFR tanks that did not comply with these requirements are included in Table 1 below. These deviations occurred because all the EFR tank requirements had not been incorporated into the refinery's compliance tasking system. BPH had been conducting and completing the required 5-year inspections for these EFR tanks. Inadvertently, BPH did not realize that the 10-year inspection requirements were different from the 5-year inspection requirements and that additional inspections of the tank deck fittings or rim seals were required. When the deficiency was discovered, BPH scheduled and completed all the required inspections by the end of the first quarter in 2021. No further deviations were found identified during the inspections. Table 1 below lists the affected tanks and the dates by which the inspections were required and when they were completed. Deviations from these requirements have not been previously reported in the quarterly Title V Deviation reports that were submitted for 2020. The Title V citations for these deviations are identified in the Part B deviations in Attachment B.

Table 1
Group 1 Subpart CC EFR Tanks Not Inspected within 10-years

OEPA ID	Tank #	Last Empty Tank Inspection	10 year inspection due	Date 10 year inspection Completed
T029	99	10/7/2004	10/7/2014	2/9/2021
T020	647	3/15/2005	3/15/2015	2/15/2021
T097	270	9/20/2007	9/20/2017	2/2/2021
T030	813	11/12/2007	11/12/2017	2/15/2021
T036	123	7/7/2008	7/7/2018	2/3/2021
T033	816	11/19/2008	11/19/2018	3/4/2021
T027	186	5/28/2009	5/28/2019	2/9/2021
T038	120	6/18/2009	6/18/2019	2/11/2021
T120	132	7/22/2009	7/22/2019	3/26/2021

Page

OEPA ID	Tank#	Last Empty Tank Inspection	10 year inspection due	Date 10 year inspection Completed
T034	817	4/1/2010	4/1/2020	3/2/2021
T039	121	5/5/2010	5/5/2020	2/10/2021
T028	189	5/19/2010	5/19/2020	2/10/2021
T060	65	5/24/2010	5/24/2020	3/18/2021
T031	814	9/9/2010	9/9/2020	2/19/2021

In late 2019, the refinery initiated an audit of the site's compliance with NSPS Subpart QQQ as part of the BP, BPH, US EPA and Ohio EPA consent decree negotiations that were underway at the time. The audit was finalized, and a compliance plan for the findings from this audit was submitted to TDES on July 21, 2020. Per this compliance plan, the findings from the audit were required to be verified prior to becoming a final deviation. One of the audit findings was verified as a devation on January 15, 2021. This finding is being related back to the audit completion date of April 22, 2020 and is therefore being added now. The NSPS QQQ audit discovered that the 2015 Applicability Assessment report that had previously identified the 1993 Benzene Stripper project as not triggering the requirements of NSPS QQQ was incorrect. The 14 drain hubs, 4 clean-outs, 10 catch basins and 5 manholes installed as part of the Benzene Stripper project are subject to the requirements of NSPS QQQ and should be controled. BPH has scheduled these upgrades to be completed by December 31, 2022 and will report such gaps in the quarterly Title V Deviation report(s) until the upgrades are completed.

This certification was prepared in accordance with a system designed to assure that qualified personnel gathered and evaluated all reasonably available information relevant to compliance with the terms and conditions of the applicable Part 70 permit during the 2020 operating year, and that they then reported their conclusions with respect to compliance. Based on my inquiry, I believe the contents of the enclosed report to be true, accurate, and complete; however, this certification should not be read to imply that I have personally reviewed all documentation underlying the compliance determination for the terms and conditions of BP-Husky's Title V Permit. Nor should it be read to imply that the persons responsible for gathering and evaluating the information relied on in making the certification have reviewed all information generated by the operations at the facility. As with any regulatory program, it is possible that there were deviations from permit conditions which may not have been identified in the normal course of a good faith effort to implement the required compliance efforts under these programs.

In addition, this certification should not be construed as containing any admissions that the reported deviations or other events are violations of any applicable requirement. In some cases, applicable rules contain various defenses and/or exemptions, which may excuse particular deviations. In other cases, the question of whether a particular event constituted a deviation or violation may be subject to interpretational disputes. In still other cases, events may be reported as deviations out of an abundance of caution despite the fact there is insufficient factual information to determine whether the deviation actually occurred.

2020 Annual Certification of Compliance

April 29, 2021 Page 4

If you have any questions regarding this submittal, do not hesitate to contact Ashley Zapp at <u>Ashley.zapp@bp.com</u> or (567) 698-4410.

Sincerely,

Des Gillen

Des Gillen President - BP-Husky Refining LLC

Attachments

April 29, 2021 Page 5

Attachment A

BP-Husky Refining LLC Annual Certification Report "Approach and Nomenclature"

- The certification report is submitted using tables that follow the general format of the forms that Ohio EPA has provided for this purpose. This is the same general format that has been used in reporting annual certification in prior years from 2007 to 2019. It is prepared following OEPA's guidance issued in 2006 that we should only report permit conditions with actual deviations.
- The first column in the Certification table provides the Permit Term Number. Most of the permit term numbers have a fairly straightforward, one-to-one relationship with individual permit conditions.
- The majority of the excursions or deviations presented in this annual certification were already reported to OEPA and Toledo Division of Environmental Services (TDES) in one of our Title V quarterly or semiannual deviation reports. The specific report, or reports, that provide the details of each deviation incident are identified in the column entitled: "Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Report)".
- BP-Husky has identified some instances where a previously reported incident constitutes a deviation of additional permit conditions of the permit than had been previously identified. For example, the quarterly deviation report may have highlighted the deviation in relation to an explicit condition in Part C of the permit but missed the fact that it also constitutes a violation of a condition in Part B of the permit. In such instances, the details about the new citation have been added in the column entitled: "Other Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken".
- BP-Husky has also found some instances, where upon further investigation; an erroneous
 deviation was reported from a Title V Permit term in one of the quarterly or semiannual deviation
 reports that were submitted. In such instances, the detail about the erroneously reported citation
 has been added in the column entitled: "Other Explain the Nature, Duration, Cause of
 Excursion/Deviation, and Corrective Actions Taken" for related citations that were added or
 correctly reported.

A. Facility Name: BP-Husky Refining, LLC

B. Facility Address: 4001 Cedar Point Road, Oregon, OH 43616

Title V Compliance Certification

C. Facility ID [10 digits] : 04-48	3-02-0007		
Original Title V Permit issu And	te Date [Multiple dates should be identified if ed 9/27/04] 104782, effective August 3, 2017.		ewed during the reporting year]:
Certification: 24	ne preceding calendar year):		
	ity-generated printout that is equivalent to what		below if attaching an Air Services
*Identify the Emissions Unit and the Emission Limitation/Control Measure or the Permit Term No.	Method Used to Determine Compliance	Exc	cursions/Deviations
		Those Documented	Other
		Within Excursion/Deviation Reports Submitted to OEPA District Office or Local Air Agency (Identify Date of Each Report)	(Explain the Nature, Duration, and Probable Cause of the Excursion/Deviation, As Well As Any Corrective Action Taken)
See attached Tables for details		Excursion/Deviation Reports Submitted to OEPA District Office or Local Air Agency (Identify Date of	Probable Cause of the Excursion/Deviation, As Well As Any
details	Place an "X" in the box to the printout in addition to or lieu of must be uploaded to Air Servi	Excursion/Deviation Reports Submitted to OEPA District Office or Local Air Agency (Identify Date of Each Report) left if you have attace of completing the roces, along with this	Probable Cause of the Excursion/Deviation, As Well As Any Corrective Action Taken) Ched a facility-generated ws above (this information

Description of material information

*Identify the Emissions Unit or

briefly describe the requirement

None

^{*}For IEUs, include the permit number or SIP-based applicable requirement rule reference

H. Certification of Compliance:

Except as indicated in Sections F and G above, all emissions units subject to one or more applicable requirements operated in continuous compliance with all federally enforceable permit terms and conditions throughout the calendar year identified in Section E above.

I, being the individual specified in OAC rule 3745-77-03(D), hereby affirm that every permit term and condition, including every permit term and condition or SIP-approved rule reference for each insignificant emissions unit that is based on an applicable requirement, has been reviewed with respect to intermittent or continuous compliance. I, being the individual specified in OAC rule 3745-77-03(D), hereby affirm that the facility identified in Sections A through C above was in continuous compliance with every permit term and condition during the reporting period, except as specified in Section F and Section G of this certification. I, being the individual specified in OAC rule 3745-77-03(D), hereby affirm that the statements made in this Title V Compliance Certification, which I am submitting to Ohio EPA via the Ohio EPA's Air Services software on the date indicated in Air Services. are true, accurate and complete, based on information and belief formed after reasonable inquiry. My completion of the attestation as part of the PIN process within Air Services also serves as my electronic signature and certification of this Title V Compliance Certification. But note, in completing the attestation as part of the PIN process within Air Services, I am not attesting that I have personally examined and am familiar with this facility's compliance with every permit term and condition covered by the certification period, I am only attesting that I have personally examined this Compliance Certification and am familiar with the information submitted herein as being true, accurate and complete based on information and belief formed after reasonable inquiry, as the Certification so states.

Note: If confidential or trade secret information is included in this submission, a copy of this Title V Compliance Certification must be submitted (i.e., post marked) to the Administrator of the United States Environmental Protection Agency c/o Director, Air and Radiation Division, U.S. EPA Region 5, 77 W. Jackson Blvd., AE-17J, Chicago, Illinois 60604. If required, it is recommended that this compliance certification be sent by certified mail to U.S. EPA. Otherwise, submission of this Certification via Air Services meets the requirement to submit a copy of the Compliance Certification to U.S. EPA.

Des Gillen	April 29, 2021
Authorized Signature	Date
Des Gillen	President, BP-Husky Refining LLC
Name (Please Print or Type)	Title

Attachment B Deviations of the revised Title V Permit P0104782 January 1, 2020 through December 31, 2020

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Title V Permit 2020 Compliance Certification

BP-Husky Refining LLC Facility ID: 04-48-02-0007

	I hose Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Corrective Actions Taken Report)	port, submitted 4-30-20 Report, submitted 7-30-20 sport, submitted 10-30-20
Excursions/Deviations	Inose Documented within Excursion/Dev Reports Submitted to Toledo Division of Environmental Services (Identify Date of Report)	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20
	Continuous (C) or Intermittent (I) Compliance?	-
	Method Used to Determine Compliance	LDAR monitoring program visual inspection
	Title V Permit Citation	A.19.

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			Excursions/Deviations	
Title V Permit Citation	Title V Permit Method Used to Determine Citation Compliance	Continuous (C) or Intermittent (I) Compliance?	Is (C) or Reports Submitted to Toledo Division of ent (I) Environmental Services (Identify Date of Each Ince?	Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
B.2.b)(2)b.i.	Visual inspection records	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
B. 2. b) (2) d.	LDAR Program records	_	Fourth Quarter Deviation Report, submitted 1-31-20	
B. 2. d) (1) g.	Review of monitoring records	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-2020)	
B.2.d)(2)n.	Visual inspection records	-	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-2020)	
B.2.d)(2)o.	LDAR Program records	1	Fourth Quarter Deviation Report, submitted 1-31-20	
B. 2. d) (4) a.	Visual inspection records	-	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
B. 2. d) (5) o.	Visual inspection records	-	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	

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Other - Explain the Nature, Duration Cause of Excursion/Deviation, and **Corrective Actions Taken** Those Documented within Excursion/Deviation Environmental Services (Identify Date of Each Second Quarter Deviation Report, submitted 7-30-20 Second Quarter Deviation Report, submitted 7-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Second Quarter Deviation Report, submitted 7-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Second Quarter Deviation Report, submitted 7-30-20 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Second Quarter Deviation Report, submitted 7-30-20 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Reports Submitted to Toledo Division of **Excursions/Deviations** Report) or Intermittent (I) Continuous (C) Compliance? **Method Used to Determine** Continuous Monitoring System (CEMS) Compliance Title V Permit C 1 b) (2) a C 1 b) (2) b C 1 f) (1) a C 2 b) (2) b C. 2. b) (2) e. C 3 b) (2) e C 2 f) (1) c C 3 f) (1) j C. 2. c) (2) C 1 c) (2) Citation **B015** - Crude 1 Furnace **B015** - Crude 1 **B015** - Crude 1 **B015** - Crude 1 Crude/Vac 2 Furnace **B029** - ADHT **B029** - ADHT Crude/Vac 2 Crude/Vac 2 Crude/Vac 2 **Emission** Juit(s) Furnace Furnace Furnace Furnace Furnace Furnace Furnace -urnace B019 -B019 -B019 -B019 -

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				Those Documented within Excursion/Deviation	
Emission Unit(s)	Title V Permit Citation	Method Used to Determine Compliance	Continuous (C) or Intermittent (I) Compliance?		Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
B031 - Vac 1 Furnace	C. 4. b) (2) d.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
B031 - Vac 1 Furnace	C. 4. c) (2)	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
B031 - Vac 1 Furnace	C. 4. f) (1) f.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
B032 - Coker 3 Furnace	C. 5. b) (2) d.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
B032 - Coker 3 Furnace	C. 5. c) (2)	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
B032 - Coker 3 Furnace	C. 5. f) (1) j.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
B036 - Reformer C. 6. b) (1) g. 3 Heater	C. 6. b) (1) g.	Record keeping requirements	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20)	
F001 - Plant Roadways	C. 7. b) (2) c.	Dust Control Contractor's Daily Completion Report	_	Third Quarter Deviation Report, submitted 10-30-20	
P007 - FCC & CO Boiler	C. 12. b) (1) b.	LDAR Records	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P007 - FCC & CO Boiler	C. 12. b) (1) j.	LDAR Records	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P007 - FCC & CO Boiler	C. 12. b) (1) n.	LDAR Records	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P007 - FCC & CO Boiler	C. 12. b) (1) q.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	

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Emission Unit(s)	Title V Permit Citation	Method Used to Determine Compliance	Continuous (C) or Intermittent (I) Compliance?	Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Report)	Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
P007 - FCC & CO Boiler	C. 12. b) (2) e.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
P007 - FCC & CO Boiler	C. 12. b) (2) f.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
P007 - FCC & CO Boiler	C. 12. b) (2) p.	LDAR Records	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P007 - FCC & CO Boiler	C. 12. c) (3) c.	Continuous Monitoring System (CEMs)	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P007 - FCC & CO Boiler	C. 12. d) (17) i.	Continuous Parameter Monitoring System (CPMSs)	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P007 - FCC & CO Boiler	C. 12. f) (1) c.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
P009 - Sulfur Recovery Unit	C. 13. b) (1) f.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20	
P009 - Sulfur Recovery Unit	C. 13. b) (1) i.	Continuous Parametric Monitoring (Temperature Indicators)	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P009 - Sulfur Recovery Unit	C. 13. b) (1) j.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
P009 - Sulfur Recovery Unit	C. 13. b) (2) j.	Continuous Parameter Monitoring System (CPMSs)	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P009 - Sulfur Recovery Unit	C. 13. b) (2) k.	Continuous Pilot Flame Monitor	-	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20	
P009 - Sulfur Recovery Unit	C. 13. c) (1) b.	Continuous Monitoring System (CMS)	_	Fourth Quarter Deviation Report, submitted 1-30-21	

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Emission Unit(s)	Title V Permit Citation	Method Used to Determine Compliance	Continuous (C) or Intermittent (I) Compliance?	Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Report)	Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
P009 - Sulfur Recovery Unit	C. 13. d) (3)	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20	
P009 - Sulfur Recovery Unit	C. 13. d) (6) f.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20	
P009 - Sulfur Recovery Unit	C. 13. d) (7) a.	Continuous Monitoring System (CEMS)	_	Second Quarter Deviation Report, submitted 7-30-20	
P010 - Crude/Vac 2	Citation: PTI P0124661 P010 Part C.(1) e)(5)	Records Review	_	Fourth Quarter Deviation Report, submitted 1-30-21	This deviation was a deviation from the PTI P0124661, issued on 11/28/2018. BPH did not submit the Initial Compliance Status report required by 40 CFR 65.5, which is referenced by NSPS NNN for the Crude/Vac 2 startup to US EPA within 60 days after startup of the modification that triggered NSPS applicability. This deviation was included in the 4Q2020 report. The Title V permit P0104782 issued on 7/13/2017 does not have a specific permit citation for this condition. BPH submitted a Title V Minor Permit Modification application on 6/26/2020 to incorporate the conditions of this PTI into the Title V permit.
P010 - Crude/Vac 2	C. 14. b) (1) c.	LDAR Program	_	Second Quarter Deviation Report, submitted 7-30-20	
P010 - Crude/Vac 2	C. 14. b) (1) e.	LDAR Program	_	Second Quarter Deviation Report, submitted 7-30-20	
P010 - Crude/Vac 2	C. 14. b) (1) f.	LDAR Program	_	Second Quarter Deviation Report, submitted 7-30-20	
P010 - Crude/Vac 2	C. 14. b) (2) c.	LDAR Program	_	Second Quarter Deviation Report, submitted 7-30-20	
P010 - Crude/Vac 2	C. 14. b) (2) d.	LDAR Program	_	Second Quarter Deviation Report, submitted 7-30-20	
P010 - Crude/Vac 2	C. 14. b) (2) e.	LDAR Program	-	Second Quarter Deviation Report, submitted 7-30-20	

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to TDES on July 21, 2020. Per this plan, the audit finding was to be reviewed and verified BPH refinery. This audit found that the 2015 BPH is now reporting this deviation and the details are included in the cover letter of this Other - Explain the Nature, Duration, on January 15, 2021, and was inadvertently not reported in the 4Q2020 deviation report. An NSPS QQQ audit was conducted in late findings from the QQQ Audit and submitted Stripper project as not triggering the requirements of NSPS QQQ was incorrect. verification for these drains was completed found not to be enclosed and was included Cause of Excursion/Deviation, and water separators to the slop oil pump was A compliance plan was developed for the 2019 per a recent Consent Decree at the Applicability Assessment report that had A section of the slop oil line from the Oilpreviously identified the 1993 Benzene citation was inadvertently left off of the 1Q2020 report. A new seal cover was in the 1Q2020 Deviation report. This prior to becoming final deviation. The **Corrective Actions Taken** nstalled on 1/20/20. ACC for 2020. First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) First Quarter Deviation Report, submitted 4-30-20 (revised 7-Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Second Quarter Deviation Report, submitted 7-30-20 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Fourth Quarter Deviation Report, submitted 1-31-21 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Report) 30-20) or Intermittent (I) Continuous (C) Compliance? **Method Used to Determine** Continuous Pilot Flame Monitor Continuous Pilot Flame Monitor Monitoring System (CPMSs) Continuous Parameter Compliance Program Audit Program Audit Title V Permit C 17 b) (2) h C 18 b) (1) b C 17 b) (2) c C. 17. b) (2) e. C 18 b) (1) Citation **P025** - Refinery WWT System **P017** - Coker 2 **P017** - Coker 2 **P017** - Coker 2 P025 - Refinery WWT System Emission Unit(s)

Emission Unit(s)	#	d to Determine	Continuous (C) or Intermittent (I) Compliance?		Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
P025 - Refinery WWT System	C. 18. b) (1) h.	Program Audit	_	Third Quarter Deviation Report, submitted 10-30-20	
P025 - Refinery WWT System	C. 18. b) (1) i.	Field Audit	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7/30/2020) Second Quarter Deviation Report, submitted 7-30-20	The deviation reported in 1Q2020 report for a section of the oil-water separator not being enclosed, is also a deviation from C.18.b)(1)b and C.18.b)(2)b. These citations were inadvertently not included in the 1Q2020 report for this deviation, but are included in this 2020 ACC.
P025 - Refinery WWT System	C. 18. b) (2) b.	Program Audit	_		A section of the slop oil line from the Oilwater separators to the slop oil pump was found not to be enclosed and was included in the 1Q2020 Deviation report. This citation was inadvertently left off the 1Q2020 report. A new seal cover was installed on 1/20/20.
P025 - Refinery WWT System	C. 18. b) (2) c.	Continuous Pilot Flame Monitor	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 (P004 only)	
P025 - Refinery WWT System	C. 18. b) (2) j.	Field Audit	-	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) 30-20) Second Quarter Deviation Report, submitted 7-30-20	

_	An NSPS QQQ audit was conducted in late 2019 per a recent Consent Decree at the BPH refinery. This audit found that the 2015 Applicability Assessment report that had previously identified the 1993 Benzene Stripper project as not triggering the requirements of NSPS QQQ was incorrect. A compliance plan was developed for the findings from the QQQ Audit and submitted to TDES on July 21, 2020. Per this plan, the audit finding was to be reviewed and verified prior these verification for these drains was completed on January 15, 2021. BPH is now reporting this deviation and the details are included in the cover letter of this ACC for 2020.	An NSPS QQQ audit was conducted in late 2019 per a recent Consent Decree at the BPH refinery. This audit found that the 2015 Applicability Assessment report that had previously identified the 1993 Benzene Stripper project as not triggering the requirements of NSPS QQQ was incorrect. A compliance plan was developed for the findings from the QQQ Audit and submitted to TDES on July 21, 2020. Per this plan, the audit finding was to be reviewed and verified prior to becoming final deviation. The verification for these drains was completed on January 15, 2021, and was inadvertently not reported in the 4Q2020 deviation report. BPH is now reporting this deviation and the details are included in the cover letter of this ACC for 2020.
Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Report)	Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	Third Quarter Deviation Report, submitted 1-31-21 Fourth Quarter Deviation Report, submitted 1-31-21
Continuous (C) or Intermittent (I) Compliance?	_	_
Method Used to Determine Compliance	Program Audit	Program Audit
Title V Permit Citation	C. 18. b) (2) j. i.	C. 18. b) (2) j. ii.
Emission Unit(s)	WWT System	WWT System WWT System

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Emission Title Unit(s) Citz	Title V Permit Citation	Φ	Continuous (C) or Intermittent (I) Compliance?		Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
	C. 18. c) (2) I.	Continuous Pilot Flame Monitor	-	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20	
1 00	C. 18. c) (3) b.	Program Audit	_	Third Quarter Deviation Report, submitted 10-30-20	
	C. 18. c) (3) c.	Review of design drawings and inspection of equipment	_	Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	An NSPS QQQ audit was conducted in late 2019 per a recent Consent Decree at the BPH refinery. This audit found that the 2015 Applicability Assessment report that had previously identified the 1993 Benzene Stripper project as not triggering the requirements of NSPS QQQ was incorrect. A compliance plan was developed for the findings from the QQQ Audit and submitted to TDES on July 21, 2020. Per this plan, the audit finding was to be reviewed and verified prior to becoming final deviation. The verification for these drains was completed on January 15, 2021. BPH is now reporting this deviation and the details are included in the cover letter of this ACC for 2020.
	C. 18. c) (3) h.	Field Audit	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7- The deviation reported in 1Q2020 report for a section of the oil-water separator not being enclosed, is also a deviation from C.18.b)(1)b and C.18.b)(2)b. These citations were inadvertently not included in the 1Q2020 report for this deviation, but are included in this 2020 ACC.	The deviation reported in 1Q2020 report for a section of the oil-water separator not being enclosed, is also a deviation from C.18.b)(1)b and C.18.b)(2)b. These citations were inadvertently not included in the 1Q2020 report for this deviation, but are included in this 2020 ACC.

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Emission Unit(s)	Title V Permit Citation	Method Used to Determine Compliance	Continuous (C) or Intermittent (I) Compliance?	Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Report)	Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
P025 - Refinery WWT System	C. 18. c) (3) 1.	Field Audit	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7- The deviation reported in 1Q2020 report for a section of the oil-water separator not a section of the oil-water separator not being enclosed, is also a deviation from C.18.b)(1)b and C.18.b)(2)b. These citations were inadvertently not included in the 1Q2020 report for this deviation, but are included in this 2020 ACC.	The deviation reported in 1Q2020 report for a section of the oil-water separator not being enclosed, is also a deviation from C.18.b)(1)b and C.18.b)(2)b. These citations were inadvertently not included in the 1Q2020 report for this deviation, but are included in this 2020 ACC.
P025 - Refinery WWT System	C. 18. c) (3) z.	Continuous Pilot Flame Monitor	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20	
P025 - Refinery WWT System	C. 18. d) (3) I.	Monitoring	_	Second Quarter Deviation Report, submitted 7-30-20	
P025 - Refinery WWT System	C. 18. d) (5) c.	Program Audit	_	Third Quarter Deviation Report, submitted 1-31-21 Fourth Quarter Deviation Report, submitted 1-31-21	An NSPS QQQ audit was conducted in late 2019 per a recent Consent Decree at the BPH refinery. This audit found that the 2015 Applicability Assessment report that had previously identified the 1993 Benzene Stripper project as not triggering the requirements of NSPS QQQ was incorrect. A compliance plan was developed for the findings from the QQQ Audit and submitted to TDES on July 21, 2020. Per this plan, the audit finding was to be reviewed and verified prior to becoming final deviation. The verification for these drains was completed on January 15, 2021. BPH is now reporting this deviation and the details are included in the cover letter of this ACC for 2020.
P025 - Refinery WWT System	C. 18. e) (3) d.	Program Audit	_	Third Quarter Deviation Report, submitted 10-30-20	

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Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken First Quarter Deviation Report, submitted 4-30-20 (revised 7-First Quarter Deviation Report, submitted 4-30-20 (revised 7-First Quarter Deviation Report, submitted 4-30-20 (revised Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Second Quarter Deviation Report, submitted 7-30-20 Second Quarter Deviation Report, submitted 7-30-20 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Report) 30-20) 30-20) 30-20) or Intermittent (I) Continuous (C) Compliance? **Method Used to Determine** Continuous Pilot Flame Monitor Continuous Pilot Flame Monitor Continuous Pilot Flame Monitor Continuous Monitoring System (CEMS) Continuous Monitoring System (CEMS) Continuous Monitoring System Continuous Parameter Monitoring System (CPMSs) Continuous Parameter Monitoring System (CPMSs) Refinery Records Compliance (CEMS) Title V Permit C 20 d) (11) b. C 19 b) (2) d C 19 b) (2) e C. 19. c) (2) a C 20 b) (2) h C 18 f) (2) c C 20 d) (10) C 20 f) (1) i. C. 22. d) (4) Citation **P036** - Coker 3 P025 - Refinery **P036** - Coker 3 **P036** - Coker 3 Recovery Unit #2 and #3 Recovery Unit #2 and #3 Recovery Unit Recovery Unit WWT System P053 - Diese P037 - Sulfur P037 - Sulfur P037 - Sulfur P037 - Sulfur Emission #2 and #3 #2 and #3 Engine #3 Unit(s)

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Emission Unit(s)	Title V Permit Citation	o Determine	Continuous (C) or Intermittent (I) Compliance?		Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
P053 - Diese l Engine #3	C. 22. d) (5)	Refinery Records	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P054 - Diese l Engine #4	C. 23. d) (3)	Refinery Records	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P803 - Reformer 3 Process Unit	C. 24. d) (1) b.	Continuous Parameter Monitoring System (CPMSs)	_	Fourth Quarter Deviation Report, submitted 1-31-21	
P803 - Reformer 3 Process Unit	C. 24. d) (1) j.	Continuous Parameter Monitoring System (CPMSs)	_	Fourth Quarter Deviation Report, submitted 1-31-21	
T120 - EFR, PR- C. 28. b) (1) d. 500132	C. 28. b) (1) d.	Records review and compliance tasking software	_	Not previously reported in 2020 Title V Deviation Report	BPH conducted an internal audit on the new applicable requirements from the Refinery Sector Rule update to 40 CFR 63 Subpart CC. Specifically, the requirements of 40 CFR 63 Subpart WW for Group 1 EFR referenced from 40 CFR 63.646. The findings from this audit were finalized in 102021. It was discovered that while BPH was completing all of the 5-year inspection requirements, there was an additional 10-year inspection requirement for the floating roof deck, deck fittings or rim seals that had not been completed. This was a new requirement that was inadvertently missed. The inspection was completed by the end of 102021. The details of this deviation are included in the cover letter of this 2020 ACC Report.
1164 - FR, PR- 500295	C. 30. b) (2) b.	Continuous Pilot Flame Monitor	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 (P004 only)	

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Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken First Quarter Deviation Report, submitted 4-30-20 (revised 7irst Quarter Deviation Report, submitted 4-30-20 (revised 7-First Quarter Deviation Report, submitted 4-30-20 (revised Fourth Quarter Deviation Report, submitted 1-31-21 (P004 Those Documented within Excursion/Deviation Environmental Services (Identify Date of Each Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Third Quarter Deviation Report, submitted 10-30-20 Third Quarter Deviation Report, submitted 10-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Fourth Quarter Deviation Report, submitted 1-31-21 Fourth Quarter Deviation Report, submitted 1-31-21 Reports Submitted to Toledo Division of Report) 30-20) 30-20) 30-20) only) or Intermittent (I) Continuous (C) Compliance? **Method Used to Determine** Continuous Pilot Flame Monitor Continuous Pilot Flame Monitor Continuous Pilot Flame Monitor Continuous Monitoring System (CEMS) Compliance Title V Permit C 31 b) (2) b C. 30. c) (1) o. C 31 c) (1) o C 34 b) (2) e C 35 b) (2) e C 34 b) (2) b. C 35 b) (2) a C 34 f) (1) a Citation **T170** - FR, PR-T164 - FR, PR-T170 - FR, PR-**Emissions Unit Emissions Unit Emissions Unit Emissions Unit Emissions Unit** Group -**B3**-: B030, B033, Group -**B2**-: B017, B022, Group -**B3**-: B030, B033, B017, B022, Group -B2-: Group -B2-: B017, B022 Emission Unit(s) 500295 500294 500294

Attachment B Part C

Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and **Corrective Actions Taken** Second Quarter Deviation Report, submitted 7-30-20 (B034 Second Quarter Deviation Report, submitted 7-30-20 (B034 Second Quarter Deviation Report, submitted 7-30-20 (P022 Third Quarter Deviation Report, submitted 10-30-20 (B034 Third Quarter Deviation Report, submitted 10-30-20 (B034 Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Fourth Quarter Deviation Report, submitted 1-31-21 Fourth Quarter Deviation Report, submitted 1-31-21 Report) only) only) only) (only) on<mark>l</mark>) only) or Intermittent (I) Continuous (C) Compliance? Method Used to Determine Continuous Monitoring System (CEMS) Continuous Monitoring System (CEMS) Continuous Monitoring System Visual inspections and LDAR Visual inspections and LDAR Visual inspections and LDAR Visual inspections and LDAR Compliance (CEMS) records. records. records. records. Title V Permit C 36 b) (2) c C 37 b) (1) d C 37 b) (2) a C. 37. b) (1) a. C 36 f) (1) a C 37 b) (1) f C. 35. f) (1) Citation P022 P023 Alkyl Units P022 P023 Alkyl Units Emissions Unit Group -**P1**-P021 P022 P023 Alkyl P022 P023 Alkyl Group -P1-P021 Group -P1-P021 Group -P1-P021 Emissions Unit **Emissions Unit Emissions Unit Emissions Unit Emissions Unit Emissions Unit** Group -**B4**-: B034, B035, Group -**B4**-: B034, B035, B030, B033, Emission Group -B3-: Unit(s) Units Units

Emission Unit(s)	Title V Permit Citation	4)	Continuous (C) or Intermittent (I) Compliance?		Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
Emissions Unit Group - P1 -P021 P022 P023 Alkyl Units	C. 37. b) (2) b.	Continuous Pilot Flame Monitor	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20	
Emissions Unit Group -P1-P021 P022 P023 Alkyl Units	C. 37. b) (2) c.	Continuous Parameter Monitoring System (CPMSs)	-	Fourth Quarter Deviation Report, submitted 1-31-21 (P004 only)	
Emissions Unit Group - P1 -P021 P022 P023 Alkyl Units	C. 37. b) (2) e.	Continuous Pilot Flame Monitor	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
Emissions Unit Group - P1 -P021 P022 P023 A lkyl Units	C. 37. b) (2) g.	LDAR Monitoring & Record keeping	-	Second Quarter Deviation Report, submitted 7-30-20 (P022 only)	
Emissions Unit Group - P2- Hydrotreaters: P028,P029,	C. 38. b) (2) d.	Continuous Parameter Monitoring System (CPMSs)	-	Fourth Quarter Deviation Report, submitted 1-31-21	
Emissions Unit Group - P2- Hydrotreaters: P028,P029,	C. 38. b) (2) e.	Continuous Pilot Flame Monitor	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20	
Emissions Unit Group - P3 -: P041,P043	C.39.b)(1)d.	LDAR Monitoring and Record Keeping Program	-	Third Quarter Deviation Report, submitted 10-30-20 (P041 only)	

BP-Husky Refining LLC Facility ID: 04-48-02-0007

Title V Permit 2020 Compliance Certification

Emission Unit(s)	Title V Permit Citation	Method Used to Determine Compliance	Continuous (C) or Intermittent (I) Compliance?	Continuous (C) Reports Submitted to Toledo Division of or Intermittent (I) Environmental Services (Identify Date of Each Compliance?	Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
Emissions Unit Group - P3 -: P041,P043	C. 39. b) (1) g.	LDAR Monitoring and Record Keeping Program	-	Third Quarter Deviation Report, submitted 10-30-20 (P041 only)	
Emissions Unit Group -P3-: P041,P043	C.39.b)(2)b.	Continuous Pilot Flame Monitor	_	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20	
Emissions Unit Group -P3-: P041,P043	C.39.b)(2)c.	LDAR Monitoring and Record Keeping Program	_	Third Quarter Deviation Report, submitted 10-30-20 (P041 only)	
Emissions Unit Group - P3 -: P041,P043	C.39.b)(2)e.	Continuous Pilot Flame Monitor	-	First Quarter Deviation Report, submitted 4-30-20 (revised 7-30-20) Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
Emissions Unit Group -P3 -: P041,P043	C.39.b)(2)f.	LDAR Monitoring and Record Keeping Program	-	Third Quarter Deviation Report, submitted 10-30-20 (P041 only)	
Emissions Unit Group -P3 -: P041,P043	C. 39. b) (2) g.	Continuous Parameter Monitoring System (CPMSs)	-	Fourth Quarter Deviation Report, submitted 1-31-21	
Emissions Unit Group - P4 - Hydrocarbon Flare Systems: P003, P004	C. 40. b) (1) b.	Continuous Parameter Monitoring System (CPMSs)	-	Third Quarter Deviation Report, submitted 10-30-20 (P003 only)	

Title V Permit

Attachment B Part C

Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken First Quarter Deviation Report, submitted 4-30-20 (revised 7-First Quarter Deviation Report, submitted 4-30-20 (revised 7-First Quarter Deviation Report, submitted 4-30-20 (revised 7-First Quarter Deviation Report, submitted 4-30-20 (revised 7-Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 (P003 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 (P003 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 (P003 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 (P003 Third Quarter Deviation Report, submitted 10-30-20 (P003 only) Fourth Quarter Deviation Report, submitted 1-31-21 (P004 Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each Report) 30-20) 30-20) 30-20) 30-20) on<mark>l</mark>y) only) only) only) or Intermittent (I) Continuous (C) Compliance? **Method Used to Determine** Continuous Pilot Flame Monitor Continuous Pilot Flame Monitor Continuous Pilot Flame Monitor Continuous Pilot Flame Monitor Continuous Parameter Monitoring System (CPMSs) Compliance Title V Permit C. 40. b) (1) d. C 40 b) (1) e C. 40. b) (1) g. C. 40. b) (1) h. C 40 b) (1) c Citation Flare Systems: P003, P004 Emissions Unit **Emissions Unit** Flare Systems: P003, P004 **Emissions Unit Emissions Unit** Hydrocarbon Flare Systems: **Emissions Unit** Flare Systems: P003, P004 Flare Systems: Hydrocarbon Hydrocarbon Hydrocarbon Hydrocarbon Emission P003, P004 P003, P004 Group -P4-Group -P4-Group -P4-Group -P4-Group -P4-Unit(s)

BP-Husky Refining LLC Facility ID: 04-48-02-0007

Attachment B Part C

Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken First Quarter Deviation Report, submitted 4-30-20 (revised 7-Third Quarter Deviation Report, submitted 10-30-20 (P003 only) Third Quarter Deviation Report, submitted 10-30-20 (P003 Those Documented within Excursion/Deviation Reports Submitted to Toledo Division of Environmental Services (Identify Date of Each 30-20) Second Quarter Deviation Report, submitted 7-30-20 Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21 Report) only) or Intermittent (I) Continuous (C) Compliance? **Method Used to Determine** Continuous Pilot Flame Monitor Continuous Monitoring System (CEMS) Continuous Parameter Monitoring System (CPMSs) Monitoring System (CPMSs) Continuous Parameter Monitoring System (CPMSs) Continuous Parameter Compliance Title V Permit C. 40. b) (2) a. C 40 b) (2) d C 40 c) (1) c C. 40. c) (1) f C. 40. b) (1) i. Citation Flare Systems: P003, P004 **Emissions Unit Emissions Unit Emissions Unit** Flare Systems: P003, P004 **Emissions Unit** Flare Systems: P003, P004 Flare Systems: P003, P004 Flare Systems: P003, P004 **Emissions Unit** Hydrocarbon Hydrocarbon Hydrocarbon Hydrocarbon Hydrocarbon Emission Group -P4-Group -P4-Group -P4-Group -P4-Group -P4-Unit(s)

Attachment B BP-Husky Refining LLC Part C Facility ID: 04-48-02-0007

	<u>.</u> =	etermine	Continuous (C) or Intermittent (I) Compliance?		Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken
Emissions Unit Group - P4 - Hydrocarbon Flare Systems: P003, P004	C. 40. c) (1) h.	Continuous Parameter Monitoring System (CPMSs)	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20	
Emissions Unit Group - P4 Hydrocarbon Flare Systems: P003, P004	C. 40. c) (3) a.	Continuous Parameter Monitoring System (CPMSs)	_	Third Quarter Deviation Report, submitted 10-30-20 (P003 only)	
Emissions Unit Group -P4- Hydrocarbon Flare Systems: P003, P004	C. 40. d) (2)	Continuous Mass Flow Meter	_	Second Quarter Deviation Report, submitted 7-30-20 Third Quarter Deviation Report, submitted 10-30-20 Fourth Quarter Deviation Report, submitted 1-31-21	
Emissions Unit Group - P7 -P044 P045 Emergency Diesel Engines #1 and #2	C. 43. d) (2)	Refinery Records	_	Fourth Quarter Deviation Report, submitted 1-31-21	

Title V Permit 2020 Compliance Certification

BP-Husky Refining LLC Facility ID: 04-48-02-0007

Other - Explain the Nature, Duration, Cause of Excursion/Deviation, and Corrective Actions Taken	BPH conducted an internal audit on the new applicable requirements from the Refinery Sector Rule update to 40 CFR 63 Subpart CC. Specifically, the requirements of 40 CFR 63 Subpart WW for Group 1 EFR referenced from 40 CFR 63.646. The findings from this audit were finalized in 1Q2021. It was discovered that while BPH was completing all of the 5-year inspection requirements, there was an additional 10-year inspection requirement to the floating roof deck, deck fittings or rim seals that had not been completed. This was a new requirement that was inadvertently missed. The inspections were completed by the end of 1Q2021. The details of this deviation are included in the cover letter of this 2020 ACC Report.
Other - Explain the Nature Cause of Excursion/Devia Corrective Actions Taken	BPH conducted an internal audit on the applicable requirements from the Refine Sector Rule update to 40 CFR 63 Subp. CC. Specifically, the requirements of 40 CFR 63 Subpart WW for Group 1 EFR referenced from 40 CFR 63,646. The findings from this audit were finalized in 102021. It was discovered that while BPH was completing all of the 5-year inspection requirements, there was an additional year inspection requirement for the float roof deck, deck fittings or rim seals that not been completed. This was a new requirement that was inadvertently miss. The inspections were completed by the of 102021. The details of this deviation are included in the cover letter of this 20 ACC Report.
Continuous (C) Reports Submitted to Toledo Division of or Intermittent (I) Environmental Services (Identify Date of Each Report)	Not reported in 2020 Title V Deviation Reports
Continuous (C) or Intermittent (I) Compliance?	_
Method Used to Determine Compliance	Reocrds review and compliance tasking software
Title V Permit Citation	C. 50. b) (1) c.
Emission Unit(s)	Emissions Unit Group -T7 EFR: only tanks T020, T027, T028, T029, T030, T031, T033, T034, T036, T038, T039, T060, T097

Appendix E: Status of Lead Abatement SEP Reports

Attached is the SEP Progress report from the Lucas County Health Department. The report(s) includes a summary of the progress in satisfying its obligations in connection with the Lead Abatement SEP under Section VIII including, at a minimum, a narrative description of activities undertaken; the status of any construction or compliance measures, including the completion of any milestones; and a summary of costs incurred since the previous report.

SEMI-ANNUAL REPORT

Report Date	Project Name	Prepared by	
29 July 2021	BP Husky Toledo Refinery Lead Paint Abatement Supplemental Environmental Project	Vaughn A. Jackson David Welch	

Toledo-Lucas County Health Department 635 North Erie Toledo, Ohio 43604 Phone: 419-213-4100

Fax: 419-213-4141



Introduction

On March 25, 2020, the United States District Court for the Northern District of Ohio entered a Clean Air Act Consent Decree among the United States, State of Ohio, and BP-Husky Refining LLC ("BPH") and BP Products North America Inc. ("BP")- the owner and operator, respectively, of the BP-Husky Toledo Refinery located in Oregon, Ohio. The Consent Decree requires the owner and operator of the refinery to fund and complete supplemental Environmental project ("SEP"), to abate certain residential and commercial structure from hazard imposed by lead-based paint.

Toledo-Lucas County Health Department ("TLCHD") entered into a services agreement with BP wherein it agreed to perform the project for the refinery with funds escrowed by BP. TLCHD plans to perform abatement on 40 to 80 homes before the project is complete.

The Consent Decree requires BP and BPH to submit a semi-annual report to EPA on February 15 and August 15 each year. Paragraph 64.a.5 of the Consent Decree requires the semi-annual report include "[a] discussion of Defendants' progress is satisfying its obligations in connection with the Lead Abatement SEP under Section VIII including, at a minimum, a narrative description of activities undertaken, the status of any construction or compliance measures, including the completion of any milestones, and a summary of costs incurred since the previous report"

TLCHD prepared this semi-annual report pursuant to the terms of its services agreement with BP to assist BP and BPH in the meeting the semi-annual reporting requirements imposed by the Consent Decree.

Project Summary

TLCHD will perform abatements on approximately 40 to 80 qualified homes during the term

Status Summary

TLCHD has partnered with the City of Toledo (COT) Department of Neighborhoods, with Memorandums of Understanding currently in place to immediately begin work on lead remediation projects. The COT has four homes in contract to utilize the BP Husky Funds. The TLCHD has sent out intake applications requesting W-2's and other income sources. Two applications have been received with completed income sources. We have been promised by homeowners that more will be coming soon. Please be aware that there is still a shortage in NW Ohio and Michigan of qualified Lead Abatement Contractors. TLCHD and the COT have partnered together to train and employ a large contingency of lead



SEMI-ANNUAL REPORT

abatement contractors and workers in the coming months. With the rise of cases due to the Delta Variant of the Covid-19 virus, the TLCHD has had to prioritize its efforts in combating this new strain of the virus. The Global Pandemic is slowing our progress but we are continuing to move forward with this project.

Project Overview

Address	Zip Code % Estimated completed Completion date		Notes	
253 Knower	43609	0	In contract	СОТ
831 Woodland	43607	0	In contract	COT
1665 W. Bancroft	43606	0	In contract	СОТ
3214 Maplewood	43610	0	In contract	СОТ
1365 Elmwood	43606	0	In review	TLCHD
556 Valleywood	43605	0	In review	TLCHD

Budget Overview

Address	Estimated Cost	Spent	Status	Notes	
253 Knower	\$25,595	0	NA		
831 Woodland	\$19,757	0	NA		
1665 W. Bancroft	\$35,289	0	NA		
3214 Maplewood	\$29,996	0	NA		
1365 Elmwood	NA	NA	NA	Working on estimates	
556 Valleywood	\$5,350	0	NA	Working on contracts	

Status: C=Completed

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

David Welch

Director of Environmental Health

Toledo-Lucas County Health Department

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Appendix F: Quarterly CEMS Reports

Copies of the reports listed below are attached and include a calculation of the total amount of time per calendar quarter that the CEMS is not in continuous operation ("downtime"), expressed as a percentage of the operating time of the process unit(s) being monitored, and a listing of the times and dates for the periods when the CEMS was not in continuous operation, with an explanation of the cause(s) of the downtime and an explanation and a description of any corrective action(s) taken.

Table F.1: Copies of Quarterly CEMS Reports

Report Name	Report Period	Date Submitted
1Q2021 Quarterly CMS Summary & Data Assessment Report	1Q2021	5/26/2021*
2Q2021 Quarterly CMS Summary & Data Assessment Report	2Q2021	7/29/2021

^{*}Original report submitted 4/27/2021 but was revised due to a clerical error in which the West Alstom Boiler was incorrectly called the East Alstom Boiler on its NOx Summary Table.

26-May-21

City of Toledo Division of Environmental Services 348 S. Erie Street Toledo, OH 43604 Attn.: Peter Park





Des Gillen
President
BP-Husky Refining LLC
4001 Cedar Point Road
Oregon, OH 43616
P 567.698.4529
des.gillen@bp.com

RE: CMS Summary & Data Assessment Report – 1st Quarter 2021

Dear Sir or Madam:

Attached is the revised CMS Summary Report and Data Assessment Report for BP-Husky Refining LLC for the period of January 1, 2021 through March 31, 2021. This report is being resubmitted due to an error on the West Alstom Boiler NOx summary table where the boiler was incorrectly called out as the East Alstom Boiler on the original submitted report. The source has been corrected on the document and the report is being resubmitted in its entirety.

CMS Summary Report (Attachment A)

A complete list of emissions units and pollutants monitored are in Table 1; Summary Reports are included in Attachment A. Excess Emissions and Monitoring Systems Performance Report is not required under 40 CFR 60.7(d) if the total duration of excess emissions is less than 1% and the CMS downtime is less than 5% of the total operating time for the quarter. Unless where noted in Table 1, these criteria were met for the units listed. All future reports will have downtime and excess emissions for gases reported in hours as described in 40 CFR 60.7(d).

Table 1. Emission Units and Pollutants Monitored

Location/Emission Unit	Parameter	Quarter 1 2021 Downtime (% unit operating time)	Notes
TIU Fuel Gas Mix Drum			
- B015 - Crude 1 Furnace		0.00	
- B017 - Coker 2 Furnace		0.00	
- B019 - Crude Vac 2 Furnace		0.00	
- B022 - Naphtha Treater Furnace		0.00	
- B029 - DHT A-Train Furnace]	0.00	
- B030 - BGOT Furnace	H₂S in Fuel Gas	0.00	
- B031 - Vac 1 Furnace	J	0.00	
- B032 - Coker 3 Furnace		0.00	
- B033 - East B-GOT Furnace		0.00	
- B034 – East Alstom Boiler		0.00	
- B035 – West Alstom Boiler		0.00	
- P007 - FCC/CO Boiler		0.00	

Location/Emission Unit	Parameter	Quarter 1 2021 Downtime (% unit operating time)	
TIU Fuel Gas Mix Drum			
- B015 - Crude 1 Furnace		1.16	
- B019 - Crude Vac 2 Furnace		1.16	
- B022 - Naphtha Treater Furnace		1.16	
- B029 - DHT A-Train Furnace	Total Sulfur in	1.16	
- B030 - BGOT Furnace	Fuel Gas	1.18	
- B031 - Vac 1 Furnace		1.16	
- B032 - Coker 3 Furnace		1.35	
- B033 - East B-GOT Furnace]	1.16	
- B034/B035 – East & West Alstom Boilers		1.16	
East Side Fuel Gas Mix Drum			
- B008 - Iso 2 Feed Heater	H₂S in Fuel	1.16	
- B009 - Iso 2 Stabilizer Reboiler	Gas	1.16	
- B010 - Iso 2 Splitter Reboiler		1.16	
B036 - Reformer 3 Furnace	H ₂ S	0.00	
P003 - East Flare (see note A)	H ₂ S	1.25	EE >1%
P003 - East Flare	Total Sulfur	0.00	
P004 – West Flare Vent Gas (see note A)	H ₂ S	0.14	
P004 – West Flare "C-Valve" Vent Gas	H₂S	0.00	
P004 – West Flare Vent Gas	Total Sulfur	1.62	
P004 – West Flare "C-Valve" Vent Gas	Total Sulfur	1.16	
B036 – Reformer 3 Furnace	NOx	6.21	Downtime > 5%
P007 – FCCU/CO Boiler Bypass (see note B)	СО	0.00	
P007 – FCCU/CO Boiler Bypass (see note B)	NOx	0.00	
P007 – FCCU/CO Boiler Bypass (see note B)	SO ₂	0.00	
P007 – CO Boiler Exhaust	СО	0.05	
P007 – CO Boiler Exhaust	NOx	0.05	
P007 – CO Boiler Exhaust	SO ₂	0.05	
P009 - Sulfur Recovery Unit with #1	SO ₂	2.61	
P037 - Sulfur Recovery Units #2 & #3	SO ₂	1.86	
B034 – East Alstom Boiler (see note C)	NOx	0.05	
B035 – West Alstom Boiler (see note C)	NOx	0.05	Only Fired Natural Gas

Note A: P003/P004 East & West Flare

The attached H_2S tables identify all emissions in excess of the Subpart Ja H_2S limit of 162 ppm $_V$ on a 3-hour rolling average. If an event did not occur for 3 consecutive hours, then it does not meet the 3-hour averaging requirement and therefore is not considered excess emissions. If a 3-hour event exceeds the 100,000 ppm $_V$ span limit of the H_2S CMS, then the Total Sulfur analyzer data was used for the H_2S value.

Note B: P007 - FCCU/CO Boiler Bypass

The purpose of these CEMS are to continuously monitor the listed (CO, NOx, & SO₂) emissions from the FCCU Regenerator exhaust in the event of a CO Boiler bypass while there is feed to the FCCU. Otherwise, compliance with the listed limits for the FCCU is determined from continuous emissions monitoring of the CO Boiler Exhaust stack. Although this source is not subject to 40 CFR Part 60, Section C.12.(d)(7) of P0104782 (as set forth by Permits-to-Install 04-01290 and P0105902) requires monitoring per 40 CFR Part 60.11. As

noted in Section C.12.(e)(4) of P0104782, the refinery has opted to follow the reporting requirements under 40 CFR 60.7. 40 CFR 60.7(c) requires the submission of an Excess Emissions and Monitoring Systems Performance Report and Summary Report Form.

Note C: B034/B035 East & West Alstom Boiler
The attached data tables include supplemental reporting for NOx CEMS records required by 40CFR49b(i).

On March 30, 2021 it was discovered that there was a torn diaphragm on the Reformer 3 sample pump. This small tear diluted the sample going to the O_2 and NOx analyzers with ambient air. It was determined that the diaphragm had been leaking since March 24, 2021 and contributed to the REF3 CEMs being down greater than 5% of the quarter.

Details of all downtime or excess emission incidents are provided in the summary tables in Attachment A.

<u>Data Assessment Report (Attachment B)</u>

In accordance with the terms and conditions of their permits, Attachment B includes the Continuous Emission Monitor (CEM) Data Assessment Report (DAR) for this quarter. Table 2 below is a summary of Cylinder Gas Audits conducted this quarter. Where noted in Table 2, Relative Accuracy Test Audits (RATAs) were conducted this quarter; these reports were submitted previously via Air Services.

Table 2. Cylinder Gas Audit Summary

Location/Emission Unit	Parameter	Notes
East Side Fuel Gas Mix Drum (B008, B009, B010)	H2S	RATA – No CGA
TIU Fuel Gas Mix Drum (B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035, P007)	H₂S	RATA – No CGA
B036 - Reformer 3 Heater H2S CMS	H ₂ S	RATA – No CGA
P003 - East Flare	H₂S	RATA – No CGA
P004 - West Flare	H₂S	RATA – No CGA
P003 - East Flare (low & high ranges)	Total Sulfur	
P004 - West Flare (low & high ranges)	Total Sulfur	
TIU Fuel Gas Mix Drum (B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035, P007)	Total Sulfur	
B036 - Reformer 3 NOx/O2 CEMS	NOx, O ₂	
B034 - East Alstom Boiler	NOx, O ₂	
B035 - West Alstom Boiler	NOx, O ₂	
P007 - FCCU/CO Boiler	SO ₂ , NOx, CO, O ₂	
P007 - FCC Regen Line	SO ₂ , NOx, CO, CO ₂ , O ₂	
P009 - SRU #1	SO ₂ , O ₂	
P037 - SRU #2 & #3 (TRP SRU)	SO ₂ , O ₂	

The DAR also includes out-of-control (OOC) times for the FCCU/CO Boiler CO CEMS, FCC Regen Line CO, O_2 , & CO_2 CEMS, the SRU#1 SO₂ & O_2 CEMS, and the TRP SRU SO₂ & O_2 CEMS based on the OOC requirements defined by the MACT general requirements, 40 CFR Part 63.8(c)(7).

If you have any questions concerning this report, please contact Ashley Zapp (<u>ashley.zapp@bp.com</u> or 567-698-4410), or Cameron Loth (<u>cameron.loth@bp.com</u> or 567-698-4833).

Based on information and belief formed after reasonable inquiry, the statements and information in this report are true, accurate, and complete.

Sincerely,

DocuSigned by:

Des Gillen

90F20640AD13450...

Des Gillen President - BP-Husky Refining LLC

Attachment A – CMS Summary Report Attachment B – Data Assessment Report

Attachment A – CMS Summary Report

Pollutant: H₂S

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: Crude 1 Furnace (0448020007B015)

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary		
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	0	
e. Unknown causes	0	e. Unknown causes	0	
Total duration of excess emissions	0	2. Total CMS Downtime	0	
Total duration of excess emissions x (100) / 0.00		3. [Total CMS Downtime] x (100) / [Total source	0.00	
[Total source operating time] % ³	0.00	operating time] % ³	0.00	

² Record all times in minutes.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: DocuSigned by:

Des Gillen —90E20640AD13450

Title: President - BP-Husky Refining LLC

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: Coker 2 Furnace (0448020007B017)

Total Source Operating Time in Reporting Period²: 115,257 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.00	operating time] % ³	0.00
² Record all times in minutes.			<u> </u>

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Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen
Signature: Des Gillen
Des Gillen

Title: President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Pollutant: H₂S

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: <u>Crude Vac 2 Furnace (0448020007B019)</u>

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³		operating time] % ³	0.00
² Record all times in minutes			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen

Title: President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: Naphtha Treater Furnace (0448020007B022)

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.00	operating time] % ³	0.00
² Record all times in minutes.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature:

Du Gillen

90F20640AD13450...

Title: President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant:	H_2S
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Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: DHT A-Train Furnace (0448020007B029)

Total Source Operating Time in Reporting Period²: 129,540 min (TIU fuel gas was combusted for 129,540 minutes and

natural gas was combusted for 0 minutes for a total of

129,540 minutes this quarter)

	CMS Perfomance Summary	
	CMS downtime in reporting period due to:	
0	a. Monitor equipment malfunctions	0
0	b. Non-monitor equipment malfunctions	0
0	c. Quality assurance calibration	0
0	d. Other known causes	0
0	e. Unknown causes	0
0	2. Total CMS Downtime	0
0.00	3. [Total CMS Downtime] x (100) / [Total source	0.00
0.00	operating time] % ³	0.00
	0 0 0	1. CMS downtime in reporting period due to: 0 a. Monitor equipment malfunctions 0 b. Non-monitor equipment malfunctions 0 c. Quality assurance calibration 0 d. Other known causes 0 e. Unknown causes 0 2. Total CMS Downtime 3. [Total CMS Downtime] x (100) / [Total source

² Record all times in minutes.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Docussianed by:

Signature: Des Gillen

Title: President - BP-Husky Refining LLC

Date: 26-May-21

90F20640AD13450..

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

Pollutant:	H_2S
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Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: BGOT Furnace (0448020007B030)

Total Source Operating Time in Reporting Period²: 127,266 min (TIU fuel gas was combusted for 127,266 minutes and

natural gas was combusted for 0 minutes for a total of

127,266 minutes this quarter)

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.00	operating time] % ³	0.00
² Record all times in minutes.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

DocuSigned by:

Signature: Des Gillen

Title: President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant:	H_2S
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Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: Vac 1 Furnace (0448020007B031)

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.00	operating time] % ³	0.00
² Record all times in minutes			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

90F20640AD13450...

Title: President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: Coker 3 Furnace (0448020007B032)

Total Source Operating Time in Reporting Period²: 111,250 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.00	operating time] % ³	0.00
² Record all times in minutes.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Dec C://ex

Signature: Des Gillen
90F20640AD13450...

Title: President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: East BGOT Furnace (0448020007B033)

Total Source Operating Time in Reporting Period²: 129,535 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.00	operating time] % ³	0.00
² Record all times in minutes.		·	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

DocuSigned by:

Signature: Des Gillen

90F20640AD13450...

Title: President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: East Alstom Boiler (0448020007B034)

Source Operating Time in Reporting Period²: 129,535 min (TIU fuel gas was combusted for 112,684 minutes and

natural gas was combusted for 16,851 minutes for a

total of 129,535 minutes this quarter)

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assu s	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0.00	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.00
² Record all times in minutes.			
1	•	r greater of the total operating time or the total CMS downtime is eport form and the excess emission report shall be submitted.	5 percent of

Describe any changes since last quarter in CMS, process, or controls.

The West Alstom Boiler combusted a combination of natural gas and TIU Mix Drum fuel gas this quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

DocuSigned by:

Signature: Des Gillen
90F20640AD13450...

Title: President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

From:	January 1,	2021	To:	April 1, 2021	
BP-Husl	ky Refining	<u>LLC</u>			
0.10 gr l	H₂S/dscf fu	el gas or	n a 3-hr rol	ling average	
4001 Ce	dar Point F	Road. Or	egon. Ohio	o 43616	
			-		
		OIN. 003	<u>9300</u>		
West Als	stom Boiler	(044802	20007B035	<u>5)</u>	
:	0		gas was co 129,536 m	ombusted for 129,536 minutes for inutes this quarter)	
ne to.					
uo to.	0				0
	0		-	•	0
	0				0
	0	d.	Other know	wn causes	0
	0	e.	Unknown o	causes	0
	0				0
	0.00	_		- , , -	0.00
ne, both th	e summary re	eport form			is 5 percent of
natural ga	as and TIU	Mix Drui	_	this quarter.	
	BP-Husl 0.10 gr l 4001 Ce Siemens 3/10/202 West Als ue to: missions isne, both th rocess,	BP-Husky Refining 0.10 gr H ₂ S/dscf fur 4001 Cedar Point F Siemens Maxum II, 3/10/2021 West Alstom Boiler 0 ue to: 0 0 0 0 0 0 0 0 rocess, or controls natural gas and TIU	BP-Husky Refining LLC 0.10 gr H ₂ S/dscf fuel gas or 4001 Cedar Point Road, Or Siemens Maxum II, SN: 009 3/10/2021 West Alstom Boiler (044802 0 min CMS Perecutor 1. CMS 0 a. 0 b. 0 c. 0 d. 0 e. 0 2. Total 0.00 operations of the summary report form rocess, or controls.	BP-Husky Refining LLC 0.10 gr H ₂ S/dscf fuel gas on a 3-hr rol 4001 Cedar Point Road, Oregon, Ohio Siemens Maxum II, SN: 009300 3/10/2021 West Alstom Boiler (0448020007B035 0 min (TIU fuel gras was conditionally assessed on the conditional strength of the conditional strength	BP-Husky Refining LLC 0.10 gr H ₂ S/dscf fuel gas on a 3-hr rolling average 4001 Cedar Point Road, Oregon, Ohio 43616 Siemens Maxum II, SN: 009300 3/10/2021 West Alstom Boiler (0448020007B035) 0 min (TIU fuel gas was combusted for 0 minutes gas was combusted for 129,536 minutes for 129,536 minutes this quarter) CMS Perfomance Summary ue to: 1. CMS downtime in reporting period due to: 0 a. Monitor equipment malfunctions 0 b. Non-monitor equipment malfunctions 0 c. Quality assurance calibration 0 d. Other known causes 0 e. Unknown causes 0 2. Total CMS Downtime 3. [Total CMS Downtime] x (100) / [Total source operating time] % ³ missions is 1 percent or greater of the total operating time or the total CMS downtime ne, both the summary report form and the excess emission report shall be submitted. rocess, or controls.

26-May-21

Date:

¹ Form described in 40 CFR 60.7 (d)

Polluta	nt:	H_2S
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Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: FCC/CO Boiler (0448020007P007)

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0.00	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.00
² Record all times in minutes.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen

President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

DEVIATION INFORMATION				
	/ SINCIECA EVITCE GGCC	WAS DEVIATION	MALFUNCTION VERBAL PEDOPT DATE	MALFUNCTION WRITTEN
DEVIATION DURATION DESCRIPTION AND PR	DESCRIPTION AND PROBABLE CAUSE FOR CONTROLLE MAINTAINE THE DEVIATION MERSURES TAKEN IF	ALFUNCTION? (Yes or No - If Yes, continue to the next	MAINTONNELLY (If no reports were made, state (If no reports were made, state If Yes, continue to the next "NO REPORTS" in the space	(If no reports were made, state "NO REPORTS" in the space
Start End OF THE DEVIATION		column)	Delow)	pelow)
	No downtime or excess emissions during this reporting quarter.	this reporting quarter.		

DocuSign Envelope ID: 7651EF6A-695E-42AD-83DC-FAE51305AEB3

Pollutant: Total Sulfur

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation:34.53 tons SO2 per rolling 12-month periodAddress:4001 Cedar Point Road, Oregon, Ohio 43616Monitor Manufacturer and Model No.:Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: Crude 1 Furnace (0448020007B015)

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	0	2. Total CMS Downtime	1500
Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	1.16
[Total source operating time] % ³ ² Record all times in minutes.		operating time] % ³	1.10

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

DocuSigned by:

Signature: Des Gillen

Title: President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: <u>January 1, 2021</u> To: April 1, 2021

Company: **BP-Husky Refining LLC**

Emission Limitation: 21.02 tons SO2 per rolling 12-month period Address: 4001 Cedar Point Road, Oregon, Ohio 43616 Monitor Manufacturer and Model No.:

Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: Crude Vac 2 Furnace (0448020007B019)

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	1500
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	1.16
[Total source operating time] % ³	"	operating time] % ³	1.16
² Record all times in minutes.	•	•	-

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen -90F20640AD13450..

Title: President - BP-Husky Refining LLC

26-May-21 Date:

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 6.45 tons SO2 per rolling 12-month period

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: Naphtha Treater Furnace (0448020007B022)

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary		
1. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	0	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emissions	0	2. Total CMS Downtime	1500	
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	1.16	
[Total source operating time] % ³		operating time] % ³	1.10	
² Record all times in minutes.				

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Title: President - BP-Husky Refining LLC

Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur				
Reporting Period Dates:	From:	January 1, 2021	To:	April 1, 2021

Company: BP-Husky Refining LLC

 Emission Limitation:
 2.32 tons SO2 per rolling 12-month period

 Address:
 4001 Cedar Point Road, Oregon, Ohio 43616

 Monitor Manufacturer and Model No.:
 Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: DHT A-Train Furnace (0448020007B029)

Total Source Operating Time in Reporting Period²: 129,540 min (TIU fuel gas was combusted for 129,540 minutes and

natural gas was combusted for 0 minutes for a total of

129,540 minutes this quarter)

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	1500
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	1 16
[Total source operating time] % ³	"	operating time] % ³	1.16

² Record all times in minutes.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen

Des Gillen

Des Gillen

Des Gillen

President - BP-Husky Refining LLC

Date: 26-May-21

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

Address:

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 3.86 tons SO2 per rolling 12-month period

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: BGOT Furnace (0448020007B030)

Total Source Operating Time in Reporting Period²: 127,266 min (TIU fuel gas was combusted for 127,266 minutes and

4001 Cedar Point Road, Oregon, Ohio 43616

natural gas was combusted for 0 minutes for a total of

127,266 minutes this quarter)

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	1500
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	1.18
[Total source operating time] % ³	"	operating time] % ³	1.18
² Record all times in minutes.	•	•	-

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

— Docusigned by:

Signature: Des Gillen

Title: President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation:11.62 tons SO2 per rolling 12-month periodAddress:4001 Cedar Point Road, Oregon, Ohio 43616Monitor Manufacturer and Model No.:Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: Vac 1 Furnace (0448020007B031)

Total Source Operating Time in Reporting Period²: 129,540 min

	CMS Perfomance Summary	
	CMS downtime in reporting period due to:	
0	a. Monitor equipment malfunctions	1500
0	b. Non-monitor equipment malfunctions	0
0	c. Quality assurance calibration	0
0	d. Other known causes	0
0	e. Unknown causes	0
0	2. Total CMS Downtime	1500
0	3. [Total CMS Downtime] x (100) / [Total source	1.16
	operating time] % ³	1.16
	0 0 0	1. CMS downtime in reporting period due to: 0

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

President - BP-Husky Refining LLC

Date: 26-May-21

Title:

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

BP-Husky Refining LLC Company:

Emission Limitation: 20.46 tons SO2 per rolling 12-month period Address: 4001 Cedar Point Road, Oregon, Ohio 43616 Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: Coker 3 Furnace (0448020007B032)

Total Source Operating Time in Reporting Period²: 111,250 min

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	0	2. Total CMS Downtime	1500
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	1.35
[Total source operating time] % ³		operating time] % ³	1.35
² Record all times in minutes		·	

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of ³ For the reporting period: greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

DocuSigned by:

Signature: Des Gillen

Title: President - BP-Husky Refining LLC

Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation:3.86 tons SO2 per rolling 12-month periodAddress:4001 Cedar Point Road, Oregon, Ohio 43616Monitor Manufacturer and Model No.:Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: <u>East BGOT Furnace (0448020007B033)</u>

Total Source Operating Time in Reporting Period²: 129,535 min

Emission Data Summary		CMS Perfomance Summary		
1. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	0	
e. Unknown causes	0	e. Unknown causes	0	
Total duration of excess emissions	0	2. Total CMS Downtime	1500	
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	1.16	
[Total source operating time] % ³		operating time] % ³	1.10	
² Record all times in minutes.		operating time; 70		

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Title: President - BP-Husky Refining LLC

Date: 26-May-21

-DocuSianed by:

¹ Form described in 40 CFR 60.7 (d)

Pollutant:	Total	Sulfur
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Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

 Emission Limitation:
 3.86 tons SO2 per rolling 12-month period

 Address:
 4001 Cedar Point Road, Oregon, Ohio 43616

 Monitor Manufacturer and Model No.:
 Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: East Alstom Boiler (0448020007B034) and West Alstom Boiler (0448020007B035)

Source Operating Time in Reporting Period²:

129,536 min (TIU fuel gas was combusted for 112,684 minutes in at least one of the Alstom Boilers for the quarter. Natural

gas was combusted for 16,852 minutes in both Alstom

Boilers for the quarter.)

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assu s	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	1500
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	1.16
² Record all times in minutes.	ļ.	I	Į.

²

Describe any changes since last quarter in CMS, process, or controls.

The East Alstom Boiler combusted only natural gas this quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen —90F20640AD13450..

Title: President - BP-Husky Refining LLC

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

		Ä	BP-HUSKY REFII	REFININ	G LLC -	TIU MIX DR	NING LLC - TIU MIX DRUM TS CMS REPORT FOR 1ST QUARTER 2021	RT FOR 1ST QUAR	TER 2021		
	Reporting Requirement (ch	esooi	ACTUAL		DEVIATION INFORMATION	NOI.		COPPECTIVE ACTIONS	WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description		Semi-	METHOD USED TO DETERMINE	DEVIATION	URATION	DEVIATION DURATION DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE MEASURES	MALFUNCTION? (Yes or No -	MALFUNCTION? (Yes or No - (if no reports were made, state (if no reports were made, state	(If no reports were made, state
	Quaneny	Annual	COMPLIANCE Date / T		ime Date / Time t End	OF THE DEVIATION		I AKEN	If Yes, continue to the next column)	NO REPORTS In the space NO REPORTS In the space below)	NO REPORTS In the space below)
B015 - Crude 1 Furnace;	Yes	0 N	Continuous Monitoring System	2/8/2021 at 08:00 hours	2/9/2021 at 09:00 hours	2992021 at CEMS out-of-control 0900 hours time for 1500 minutes	Analyzer failed daily validation.	Recalibrated and returned the analyzer to service.	Ŷ.	NA	NA

Pollutant:	H ₂ S
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Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30028039490020

Date of Latest CMS Certification or Audit: 3/18/2021

Process Unit(s) Description: <u>lso 2 Feed Heater (0448020007B008)</u>

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period du	e to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	1500
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0.00	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	1.16
² Record all times in minutes.	•		
³ For the reporting period: If the total duration of excess en	nissions is 1 perc	ent or greater of the total operating time or the total CMS downtime is	5 percent

For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen

Des Gillen

Des Gillen

President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30028039490020

Date of Latest CMS Certification or Audit: 3/18/2021

Process Unit(s) Description: <u>Iso 2 Stabilizer Reboiler (0448020007B009)</u>

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summarv		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	1500
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	1.16
[Total source operating time] %3	0.00	operating time] % ³	1.10
² Record all times in minutes.			
³ For the reporting period: If the total duration of excess em	iesions is 1 nero	ent or greater of the total operating time or the total CMS downtime is	s 5 nercent

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

¹ Form described in 40 CFR 60.7 (d)

Pollutant:	H_2S
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Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30028039490020

Date of Latest CMS Certification or Audit: 3/18/2021

Process Unit(s) Description: <u>Iso 2 Splitter Reboiler (0448020007B010)</u>

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period du	e to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1500
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	1500
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	1.16
[Total source operating time] %3	0.00	operating time] % ³	1.10
² Record all times in minutes.			· ·
³ For the reporting period: If the total duration of excess en	nissions is 1 perc	ent or greater of the total operating time or the total CMS downtime	is 5 percent

of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Title: Pr@sidenti-9BP-Husky Refining LLC

Date: 26-May-21

Describe any changes since last quarter in CMS, process, or controls.

¹ Form described in 40 CFR 60.7 (d)

		<u>.</u>	ומסער ואב	BP-HUSKY KEFINING LL	LLC - EA	ST SIDE M	IIX DRUM H2S C	MS REPORT FO	C - EAST SIDE MIX DRUM H2S CMS REPORT FOR 1ST QUARTER 2021	2021	
	Requireme	Reporting Requirement (choose	ACTUAL		DEVIATION INFORMATION	Z		COBBECTIVE	WAS DEVIATION	MALFUNCTION VERBAL MALFUNCTION WRITTEN	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description	1	Semi-	METHOD USED TO DETERMINE	DEVIATION	DURATION	DESCRIPTION AND MAGNITUDE	DEVIATION DURATION AND MAGNITUDE THE DEVIATION	PREVENTATIVE	MALFUNCTION? (Yes or No -	MALFUNCTION? (Yes or No - (if no reports were made, state (if no reports were made, state in the manual st	If no reports were made, state
	Zual telliy	Annual	COMPLIANCE Date / Time Start End	Date / Time Start	Date / Time End	OF THE DEVIATION			ii res, continue to the next column)	column) below) below)	NO REPORTS III the space below)
B008 - Iso 2 Feed Heater B009 - Iso 2 Stabilizer Reboiler B010 - Iso 2 Splitter Reboiler	Yes	o _N	Continuous Monitoring System	2/15/2021 at 308:00 hours	2/15/2021 at 2/16/2021 at 08:00 hours	CEMS out-of- control time for 1500 minutes	Analyzer failed daily validation.	Recalibrated and returned the analyzer to service.	ON.	N/A	N/A

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Pollutant:	H_2S
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Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30028039490020

Date of Latest CMS Certification or Audit: 3/18/2021

Process Unit(s) Description: Reformer 3 Furnace (0448020007B036)

Total Source Operating Time in Reporting Period²: 18,720 min

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0.00	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.00
² Record all times in minutes.	<u> </u>	1 1 0 1	
i oi aio iopoi ai g ponodi		nt or greater of the total operating time or the total CMS downtime is imary report form and the excess emission report shall be submitted	•

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
riue.	President - BP-Husky Reinling LLC
Date:	26-May-21

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H ₂ S							
Reporting Period Dates:	From:	January 1, 20	<u>)21</u>	Т	o:	April 1, 2021	
Company:	BP-Husl	ky Refining LL	<u>.C</u>				
Emission Limitation:	162 ppm	ıv H₂S in fuel o	gas	on a 3-hr ro	olling a	<u>average</u>	
Address:	4001 Ce	dar Point Roa	ad, C	Oregon, Ohi	o 436	<u>16</u>	
Monitor Manufacturer and Model No.:		Maxum II, SI		=		_	
Date of Latest CMS Certification or Audit:	3/11/202						
Process Unit(s) Description:		er 3 Furnace(044	8020007B0	36)		
Total Source Operating Time in Reporting F		110,820		min (Refo	rmer 3 al gas v	fuel gas was combusted for 110,820 min was combusted for 0 minutes for a total of quarter)	
Emission Data Summary			CN	IS Perfoma	nce S	Summary	
1. Duration of excess emissions in reporting p	period due	to:	1.	CMS dowr	ntime	in reporting period due to:	
a. Start-up/Shutdown:		0		a. Monito	r equi	pment malfunctions	0
b. Control equipment problems		0		b. Non-m	onitor	equipment malfunctions	0
c. Process Problems		0		c. Quality	assu	rance calibration	0
d. Other known causes		0		d. Other I	knowr	n causes	0
e. Unknown causes		0		e. Unkno	wn ca	uses	0
Total duration of excess emissions		0	2.	Total CMS			0
Total duration of excess emissions x (100) [Total source operating time] % ³ Record all times in minutes.		0.00	3.	[Total CMS		/ntime] x (100) / [Total source % ³	0.00
³ For the reporting period: If the total duration of						operating time or the total CMS downtime excess emission report shall be submitt	
Describe any changes since last quarter in The Reformer 3 Furnace combusted a combin					al gas	this quarter.	
I certify that the information contained in th			•		Ū	•	
•		,	,				
Name: Des Gillen			-				
Signature: Dus Gillen 90F20640AD13450			-				
Title: President - BP-Husky Refining L	LC						

26-May-21

Date:

¹ Form described in 40 CFR 60.7 (d)

Poll	utant:	H₂S
	utaiit.	1120

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 60 ppmv H₂S in fuel gas on a 365-day rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30029994471080

Date of Latest CMS Certification or Audit: 3/11/2021

Process Unit(s) Description: Reformer 3 Furnace (0448020007B036)

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0.00	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.0
² Record all times in minutes.		· · · · · · · · · · · · · · · · · · ·	
	•	ent or greater of the total operating time or the total CMS downtime nmary report form and the excess emission report shall be submitte	•

Describe any changes since last quarter in CMS, process, or controls.

The Reformer 3 Furnace combusted a combination of Reformer 3 fuel gas and natural gas this quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	26-May-21

¹ Form described in 40 CFR 60.7 (d)

				BP-H	BP-HUSKY RE	EFINING LLC	EFINING LLC - REFORMER 3 FURNACE H2S CMS REPORT FOR 1ST	2S CMS REPORT FOR	1ST		
SNOISSING		Reporting Requirement (choose one or both)	Reporting Requirement (choose one or both)		DEVIATION				WAS DEVIATION	WAS DEVIATION MALFUNCTION VERBAL MALFUNCTION WRITTEN	MALFUNCTION WRITTEN
TINO	1	Semi-	TO DETERMINE	DEVIATION DU	JRATION	В	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No -	ALFUNCTION? (9s or No - (if no reports were made, state (if no reports were made, state	f no reports were made, state
ID/Description Quarterly	Quarterly	Annual	COMPLIANCE	Date / Time Start	Date / Time End	OF THE DEVIATION			ir Yes, continue to the next column)	if Yes, continue to the next NO KEPORIS in the space olumn) below) below)	NO KEPOKIS In the space below)
B036 - Reformer	>o/	ž	Continuous Monitoring				oxe to emitme or exe	No downtime or excess emissions during this reporting guarter			
3 Furnace	2	2	System				NO 10 011111111010 011	מוופפוסופ ממווום ווייי יבלביייים להמיניי			

DocuSign Envelope ID: 7651EF6A-695E-42AD-83DC-FAE51305AEB3

Pol	lutant:	H₂S

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: **BP-Husky Refining LLC**

Emission Limitation: 162 ppmv H₂S in fuel gas on a 3-hr rolling average

4001 Cedar Point Road, Oregon, Ohio 43616 Address:

Siemens Maxum II, SN: 30050531960100 **Monitor Manufacturer and Model No.:**

Date of Latest CMS Certification or Audit: 3/17/2021

Process Unit(s) Description: East Flare (0448020007P003)

Total Source Operating Time in Reporting Period²: 129,540 minutes

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	1620
c. Process Problems	2760	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	2,760	2. Total CMS Downtime	1,620
Total duration of excess emissions x (100) / [Total source operating time] % ³	2.13	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	1.25
² Record all times in minutes.			
i o. a.o.opo.ag ponoa.	•	ent or greater of the total operating time or the total CMS downtim	•

of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Des Gillen Name: DocuSigned by: Signature: Des Gillen 90F20640AD13450.. Title: President - BP-Husky Refining LLC 26-May-21 Date:

¹ Form described in 40 CFR 60.7 (d)

	TTEN	e, state	space				
	MALFUNCTION WRITTEN	(If no reports were mad	"NO KEPOK IS" in the space below)	N/A	NA	NA	N/A
	MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state	"NO KEPOKIS" in the space below)	ΥN	٧/N	٧/N	V/N
QUARTER 2021	WAS DEVIATION	MALFUNCTION? (Yes or No - If	Yes, continue to the next column)	No	N _O	N _O	Š
BP-HUSKY REFINING LLC - EAST FLARE H2S CMS REPORT FOR 1ST QUARTER 2021		CORRECTIVE ACTIONS / MALFUNCTION? (Yes or No - If (if no reposits were made, state (if no reposits were made, state		Analyzer falled daily validation due Cleared line, recalibrated the analyzer to vent line freeze-up.	Applied steam to the pitot line and re- installed insulation box around the PSV.	Purged the ISO2 reactor to the flare per procedure and safely restarted the compressor.	Purged the ISO2 reactor to the flare per procedure and safely restarted the compressor.
AST FLARE H2S CM		PROBABLE CAUSE FOR THE DEVIATION		Analyzer failed daily validation due to vent line freeze-up.	PSV lifted to the flare due to a frozen pilot line.	ISO2 Recycle Compressor level tripped on a false alarm. The unit relieved to the flare to prevent overpressure.	ISO2 Recycle Compressor level tripped on a false alarm. The unit relieved to the flare to prevent overpressure.
IING FFC - E	NO TION	DESCRIPTION AND	OF THE DEVIATION	CEMS out-of-control time for 1620 minutes	CEMS excess emissions for 720 minutes	CEMS excess emissions for 180 minutes	CEMS excess emissions for 1860 minutes
Y REFIN	DEVIATION INFORMATION	DURATION	Date / Time End	2/10/2021 at 10:00 hours	1/30/2021 at 19:00 hours	3/10/2021 at 11:00 hours	3/11/2021 at 19:00 hours
3P-HUSK		DEVIATION DURATION	Date / Time Start	2/9/2021 at 07:00 hours	1/30/2021 at 07:00 hours	3/10/2021 at 08:00 hours	3/10/2021 at 12:00 hours
ш	ACTILIAI METHOD	USED TO DETERMINE	COMPLIANCE	Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System
	Reporting Requirement (choose one or both)	Semi-		Yes	Š	Š	Š
	Reporting I (choose o	(Quarterly	N _O	Yes	Yes	Yes
		EMISSIONS UNIT ID/Description		P003 - East Flare	P003 - East Flare	P003 - East Flare	P003 - East Flare

Excess Emission and Monitoring System Performance Report East Flare H2S CEMS Report (Source # P003) 10 2021

In accordance with the applicable PTIs for this source, written reports of excess emissions shall include the following information:

1. The magnitude of excess emissions computed in accordance with §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

During the 1st quarter of 2021, the East Flare operated for a total of 2,159 hours. There were 3 periods of excess emissions for a total of 46 hours, which accounted for 2.13% of the source's operating time.

The first period of excess emissions was quantified as 7,687 ppm above the permitted 162-ppm 3-hour, rolling average of H2S, resulting in a total of 171 lbs of excess SO₂ released. Date and time of commencement and completion of this period of excess emissions are as follows:

1/30/2021 at 7:00 hours to 1/30/2021 at 19:00 hours

The second period of excess emissions was quantified as 11 ppm above the permitted 162-ppm 3-hour, rolling average of H2S, resulting in 2 lbs of excess SO₂ released. Date and time of commencement and completion of this period of excess emissions are as follows:

• 3/10/2021 at 8:00 hours to 3/10/2021 at 11:00 hours

The third period of excess emissions was quantified as 263 ppm above the permitted 162-ppm 3-hour, rolling average of H2S, resulting in 221 lbs of excess SO₂ released. Date and time of commencement and completion of this period of excess emissions are as follows:

- 3/10/2021 at 12:00 hours to 3/11/2021 at 19:00 hours
- 2. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

The first period of excess emissions was when a pilot sense line froze causing the PSV to lift. When the sense line on this PSV was frozen, it resulted in pressure being released on the back of the seal and caused the valve to open. The PSV was wrapped with temporary insulation. The PSV lift occurred intermittently for several hours, until the PSV reseated and streams were being fully recovered by the flare gas recovery system.

The second and third periods of excess emissions were a result of the ISO 2nd stage Recycle Compressor tripping due to a false high-level alarm. The trip of the compressor resulted in an emergency shutdown of the unit. Flaring continued until the unit was shut down and all streams were being fully recovered by the flare gas recovery system.

3. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

There was one period of downtime of downtime for the quarter while the source was in operation.

• 2/9/2021 at 7:00 hours to 2/10/2021 at 10:00 hours

The analyzer failed its daily validation due to a vent line freeze up. The vent line was cleared, the analyzer was recalibrated and returned to service.

Pollutant: Total Sulfur

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: NA - Analyzer used to calculate SO₂ emissions

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-10430115

Date of Latest CMS Certification or Audit: TS Low: 1/20/2021; TS High: 1/20/2021

Process Unit(s) Description: East Flare (0448020007P003)

Total Source Operating Time in Reporting Period²: 129,540 minutes

Emission Data Summary		CEMS Perfomance Summary			
1. Duration of excess emissions in reporting period due	e to:	CEMS downtime in reporting period due to:			
a. Start-up/Shutdown:	NA	a. Monitor equipment malfunctions	0		
b. Control equipment problems	NA	b. Non-monitor equipment malfunctions	0		
c. Process Problems	NA	c. Quality assurance calibration	0		
d. Other known causes	NA	d. Other known causes	0		
e. Unknown causes	NA	e. Unknown causes	0		
2. Total duration of excess emissions	NA	2. Total CEMS Downtime	0		
3. Total duration of excess emissions x (100) /	NA	3. [Total CEMS Downtime] x (100) / [Total source	0.00		
[Total source operating time] % ³	INA	operating time] % ³	0.00		
² Record all times in minutes.					

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

—DocuSigned by:

Signature: Des Gillen

Title: President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

			_	BP-HUSKY REFINI	(Y REFII	NING LLC - E	NG LLC - EAST FLARE TS CMS REPORT FOR 1ST QUARTER 2021	MS REPORT FOR 1	ST QUARTER 202	21	
		Reporting Requirement (choose	ACTUAL		DEVIATION INFORMATION	NO		COBBECTIVE ACTIONS	WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description		Semi-	METHOD USED TO DETERMINE	DEVIATION I	DEVIATION DURATION	DE	PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE MEASURES	MALFUNCTION? (Yes or No -	MALFUNCTON? (Sor No - (if no reports were made, state (if no reports were made, state in the control of the con	(If no reports were made, state
	Qualieny	Annual	COMPLIANCE Date / Time Date / Time Start End	Date / Time Start	Date / Time End	OF THE DEVIATION		ANEIN	II res, continue to the next column)	column) below) below)	below)
P003 - East Flare	ON.	Yes	Continuous Monitoring System				No downti	No downtime or excess emissions during this reporting quarter.	reporting quarter.		

Pollutant: H₂S

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 162 ppmv H₂S in fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30050531960400

Date of Latest CMS Certification or Audit: 3/9/2021

Process Unit(s) Description: West Flare Vent Gas (0448020007P004)

Total Source Operating Time in Reporting Period²: 129,540 minutes

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	420	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	180
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	420	2. Total CMS Downtime	180
3. Total duration of excess emissions x (100) /	0.32	3. [Total CMS Downtime] x (100) / [Total source	0.14
[Total source operating time] %3	0.32	operating time] % ³	0.14
² Record all times in minutes.			

Record all times in minutes

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Title:

90F20640AD13450...

President - BP-Husky Refining LLC

Date: 26-May-21

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H ₂ S	Po	lluta	nt:	H₂S
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Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 162 ppmv H₂S in fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 3/10/2021

Process Unit(s) Description: West Flare C Valve (0448020007P004)

Total Source Operating Time in Reporting Period²: 129,540 minutes

Emission Data Summarv		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	NA	a. Monitor equipment malfunctions	0
b. Control equipment problems	NA	b. Non-monitor equipment malfunctions	0
c. Process Problems	NA	c. Quality assurance calibration	0
d. Other known causes	NA	d. Other known causes	0
e. Unknown causes	NA	e. Unknown causes	0
2. Total duration of excess emissions	NA	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	NA ⁴	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.00
² Record all times in minutes.			
1	•	cent or greater of the total operating time or the total CMS downting immary report form and the excess emission report shall be submit	•
⁴ Excess emissions are reported in the West Flare Vent Gas s	ection, and are	not included in this section to avoid double counting.	

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	Des Gillen
	90F20640AD13450
Title:	President - BP-Husky Refining LLC
Date:	26-May-21

¹ Form described in 40 CFR 60.7 (d)

			B	P-HUSK)	BP-HUSKY REFINING		ST FLARE H2S CM	LLC - WEST FLARE H2S CMS REPORT FOR 1ST QUARTER 2021	QUARTER 2021		
	Reporting F (choose or	Reporting Requirement (choose one or both)	ACTIIAL METHOD		DEVIATION INFORMATION	NO NO		CORRECTIVE ACTIONS /	WAS DEVIATION	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE
EMISSIONS UNIT ID/Description		Semi-	ш	DEVIATION	DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	Ŋ	MALFUNCTION? (Yes or No - If	MALFUNCTION? (Yes or No - If (if no reports were made, state (if no reports were made, state	(If no reports were made, state
	Quarteriy	Annual	COMPLIANCE	Date / Time Start	Date / Time End	Date / Time Date / Time OF THE DEVIATION Start End		NI W	res, continue to the next column)	NO REPORTS in the space below) below)	NO REPORTS IN the space below)
P004 - West Flare	o _N	Sə	Continuous Monitoring 2/22/2021 at 2/22/2021 at CEMIS System 09:00 hours 12:00 hours 1	2/22/2021 at 09:00 hours	2/22/2021 at 2/22/2021 at 09:00 hours 12:00 hours	CEMS downtime for 180 minutes	Rebuilt sample valve due to analyzer drift.	Completed the rebuild, recalibrated the analyzer and returned to service.	ON.	N/A	N/A
P004 - West Flare	Yes	No	Continuous Monitoring 3/9/2021 at 3/10/2021 at System 22:00 hours 05:00 hours	3/9/2021 at 22:00 hours	3/10/2021 at 05:00 hours	CEMS excess emissions for 420 minutes	ISO2 Recycle Compressor level tripped on a false alarm. The unit relieved to the flare to prevent overpressure.	ISO2 Recycle Compressor level purged the ISO2 reactor to the flare ripped on a false alarm. The unit per procedure and safely restarted relieved to the flare to prevent overpressure.	ON N	N/A	N/A

Pollutant: Total Sulfur

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: NA - Analyzer used to calculate SO2 emissions

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-10440115

Date of Latest CMS Certification or Audit: TS Low: 1/22/2021; TS High: 1/22/2021

Process Unit(s) Description: West Flare Vent Gas (0448020007P004)

Total Source Operating Time in Reporting Period²: 129,540 minutes

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	NA	a. Monitor equipment malfunctions	1,560
b. Control equipment problems	NA	b. Non-monitor equipment malfunctions	0
c. Process Problems	NA	c. Quality assurance calibration	0
d. Other known causes	NA	d. Other known causes	540
e. Unknown causes	NA	e. Unknown causes	0
2. Total duration of excess emissions	NA	2. Total CEMS Downtime	2,100
3. Total duration of excess emissions x (100) /	NA	3. [Total CEMS Downtime] x (100) / [Total source	1.62
[Total source operating time] % ³	INA	operating time] % ³	1.02
2 Record all times in minutes			

Record all times in minutes.

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature:

Des Gillen

90F20640AD13450...

Title: President - BP-Husky Refining LLC

Date: 26-May-21

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation:

Address:

MA - Analyzer used to calculate SO2 emissions

4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.:

Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 1/25/2021

Process Unit(s) Description: West Flare C Valve (0448020007P004)

Total Source Operating Time in Reporting Period²: 129,540 minutes

Emission Data Summarv		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	NA	a. Monitor equipment malfunctions	1500
b. Control equipment problems	NA	b. Non-monitor equipment malfunctions	0
c. Process Problems	NA	c. Quality assurance calibration	0
d. Other known causes	NA	d. Other known causes	0
e. Unknown causes	NA	e. Unknown causes	0
2. Total duration of excess emissions	NA	2. Total CEMS Downtime	1,500
3. Total duration of excess emissions x (100) /	NIA	3. [Total CEMS Downtime] x (100) / [Total source	1 16
[Total source operating time] % ³	NA	operating time] % ³	1.16
² Record all times in minutes.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen
Signature: Des Gillen
President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

				BP-HUSK	BP-HUSKY REFINING	LLC - WEST	FLARE TS CMS RI	LLC - WEST FLARE TS CMS REPORT FOR 1ST QUARTER 2021	IARTER 2021		
	Reporting F (choose or	Reporting Requirement (choose one or both)	ACTUAL METHOD		DEVIATION INFORMATION			COBBECTIVE ACTIONS	WAS DEVIATION	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description		Semi-	USED TO DETERMINE	DEVIATION DURATION	DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE MEASURES	MALFUNCTION? (Yes or No -		(If no reports were made, state
	Qualificity	Annual	COMPLIANCE	Date / Time Start	Date / Time End	OF THE DEVIATION		- ANEIA	column)	below)	below)
P004 - West Flare	Yes	o _N	Continuous Monitoring System	2/18/2021 at 08:00 2/18/2021 at 10:00 hours	2/18/2021 at 10:00 hours	CEMS downtime for 120 minutes	Recalibrated for drift.	Returned the analyzer to service.	OV	N/A	N/A
P004 - West Flare	Yes	o _N	Continuous Monitoring System	3/2/2021 at 08:00 hours	3/3/2021 at 10:00 hours	CEMS out-of-control time for 1560 minutes	Analyzer failed daily validation.	Replaced pyrolizer and oven assembly, recalibrated and returned the analyzer to service.	ON	N/A	N/A
P004 - West Flare	Yes	o Z	Continuous Monitoring System	3/4/2021 at 08:00 hours	3/4/2021 at 15:00 hours	CEMS downtime for 420 minutes	Analyzer was drifting.	Replaced sample valve, recalibrated and reuthred the analyzer to service.	ON	N/A	ΝΑ

Pollutant: NOx

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 40 ppm_{vd} (30-day rolling average)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS O2

Date of Latest CEMS Certification or Audit: 1/12/2021

Process Unit(s) Description: Reformer 3 Furnace (0448020007B036)

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	8040
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	8040
3. Total duration of excess emissions x (100) /	0.00	3. [Total CEMS Downtime] x (100) / [Total source	6.21
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes.	•		
Tot allo roporarig portou.		ercent or greater of the total operating time or the total CEMS do both the summary report form and the excess emission report sh	

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

D

¹ Form described in 40 CFR 60.7 (d)

				BP-HUSKY	REFINING	LLC - REFOR	BP-HUSKY REFINING LLC - REFORMER 3 FURNACE NOx CEMS REPORT FOR 1ST QUARTER 2021	REPORT FOR 1ST QU	ARTER 2021		
	Reporting Requiremen (choose one or both)	Requirement	Reporting Requirement (choose one or both)		DEVIATION INFORMATION				WAS DEVIATION ATTRIBITABLE TO A	WAS DEVIATION MALFUNCTION VERBAL MALFUNCTION WRITTEN ATTRIBUTABLE TO A REPORT DATE REPORT DATE	MALFUNCTION WRITTEN REPORT DATE
EMISSIONS UNIT	Viortoria	Semi-	TO DETERMINE		DEVIATION DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No	MALFUNCTON (Yes or No - (if no reports were made, state (if no reports were made, state is the person of the perso	If no reports were made, state
	Qualifelly	Annual	COMPLIANCE	Date / Time Start	Date / Time Date / Time Start End	OF THE DEVIATION			oolumn)	below)	below)
B036 - Reformer 3 Furnace	Yes	oN.	Continuous Emission 3/24/2021 at Monitoring System (CEMS) hours	3/24/2021 at 23:00 hours	3/30/2021 at 13:00 hours	CEMS downtime for 8040 minutes	Centinuous Emission 324/2021 at 23:00 3/30/2021 at 13:00 CEMS downtime for Montioring System (CEMS) hours hours and one of the properties of the fourth and your analyzers with the complete and the complete of the complete and the complete of the complete and the complete of the complet	Repaired the pump, recalibrated the analyzer and returned to service.	ON	Y/N	N/A

Pollutant: CO						
Reporting Period Dates:	From:	January 1,	2021	To:	April 1, 2021	
Company:	BP-Husk	ky Refining	<u>LLC</u>			
Emission Limitation:	500 ppm	ıv CO, db,	1-hr a	<u>verage</u>		
Address:	4001 Ce	dar Point R	Road,	Oregon, Ohio	<u>43616</u>	
Monitor Manufacturer and Model No.:	ABB UR	AS 14, SN:	3.24	0684.3		
Date of Latest CEMS Certification or Audi	t: 1/14/202	21				
Process Unit(s) Description:	FCCU/C	O Boiler B	/pass	, 0448020007	P007	
Total Source Operating Time in Reporting		0		nin	<u> </u>	
Total Godice Operating Time in Reporting	, i ciioù .		1.	<u> </u>		
Emission Data Summary			CMS	Perfomance	Summary	
1. Duration of excess emissions in reporting	period due t	0:	1. C	CMS downtime	e in reporting period due to:	
a. Start-up/Shutdown:		0	а	ı. Monitor eq	uipment malfunctions	0
b. Control equipment problems		0	b	. Non-monit	or equipment malfunctions	0
c. Process Problems		0	С	. Quality ass	surance calibration	0
d. Other known causes		0	d	I. Other know	vn causes	0
e. Unknown causes		0	e	. Unknown d	auses	0
2. Total duration of excess emissions		0		otal CMS Do	wntime	0
3. Total duration of excess emissions x (100	0) /	0	_		owntime] x (100) / [Total source	0.00
[Total source operating time] % ³ ² Record all times in minutes. Minutes of operation	n are defined a	s when FCCI		perating time		ervice
³ For the reporting period: If the total duration	of excess emiss	sions is 1 per	cent or	greater of the to	otal operating time or the total CMS down	ntime is 5
Describe any changes since last quarter i Not Applicable - No changes since the previous I certify that the information contained in Name: Des Gillen	quarter.	·			te.	
DocuSigned by:			•			
Signature: Des Gillen 90F20640AD13450			•			
Title: President - BP-Husky Refining	LLC					

26-May-21

Date:

¹ Form described in 40 CFR 60.7 (d)

			BP-HU	BP-HUSKY REFINING	FINING	LLC - FCC R	EGEN VENT CO	CEMS REP	LLC - FCC REGEN VENT CO CEMS REPORT 1ST QUARTER 2021	ER 2021	
	Requireme	Reporting Requirement (choose	ACTUAL		DEVIATION INFORMATION	NO TION		CORRECTIVE	WAS DEVIATION	MALFUNCTION VERBAL MALFUNCTION WRITTEN DEBOOT DATE DEBOOT DATE	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description			METHOD USED TO DETERMINE	DEVIATION	DEVIATION DURATION	DESCRIPTION AND MAGNITUDE	DESCRIPTION PROBABLE CAUSE FOR AND MAGNITUDE THE DEVIATION	ACTIONS / PREVENTATIVE	MALFUNCTION? (Yes or No-	MALFUNCTION? (Yes or No - (If no reports were made, state (If no reports were made, state	(If no reports were made, state
	Спапепу		Annual COMPLIANCE Date / Time Date / Time Start End	Date / Time Start	Date / Time End	OF THE DEVIATION		MEASURES TAKEN	If Yes, continue to the next column)	If Yes, continue to the next rook Reports in the space column)	"No Keports" in the space below)
D007 - F0011			Continuous								
CO Boiler Bypass	Yes	N _o	Emissions Monitoring			Bypass St	ack not in operation during the	quarter, therefore no e	Bypass Stack not in operation during the quarter, therefore no excess emissions or part 60 CEMS downtime to report.	S downtime to report.	
Stack			System (CEMS)								

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Pollutant: NOx						
Reporting Period Dates:	From:	January 1,	202	<u>1</u> To:	April 1, 2021	
Company: Emission Limitation:		ky Refining nv NOx db		% O2 (365-day	rolling avg)	
Address:	4001 Ce	dar Point R	load	, Oregon, Ohio	43616	
Monitor Manufacturer and Model No.:	<u> </u>				O2, SN: 3.240682.3	
Date of Latest CEMS Certification or Audit:	1/14/202	21				
Process Unit(s) Description:	FCCU/C	O Boiler By	/pas	s, 0448020007	<u>P007</u>	
Total Source Operating Time in Reporting Pe	eriod ² :	0		min		
Emission Data Summary			CM	S Perfomance	Summary	
Duration of excess emissions in reporting per	eriod due t	0:			e in reporting period due to:	
a. Start-up/Shutdown:		0			uipment malfunctions	0
b. Control equipment problems		0		b. Non-monito	or equipment malfunctions	0
c. Process Problems		0		c. Quality ass	urance calibration	0
d. Other known causes		0		d. Other know	n causes	0
e. Unknown causes		0		e. Unknown c	auses	0
2. Total duration of excess emissions		0	2.	Total CMS Dov	vntime	0
3. Total duration of excess emissions x (100) /		0	3.	[Total CMS Do	wntime] x (100) / [Total source	0.00
[Total source operating time] % ³				operating time]		<u> </u>
	xcess emiss	sions is 1 per	cent o	or greater of the to	tal operating time or the total CMS dowr	ntime is 5
Describe any changes since last quarter in Control Not Applicable - No changes since the previous quarter.	CEMS, pro	ocess, or co	ontr	ols.		
I certify that the information contained in this	s report is	s true, accı	urate	e, and complet	e.	
Name: Des Gillen Docusiqued by:						
Signature: Des Gillen 90F20640AD13450						
Title: President - BP-Husky Refining LL	.C					

26-May-21

Date:

¹ Form described in 40 CFR 60.7 (d)

Company:

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

BP-Husky Refining LLC

To:

April 1, 2021

Reporting Period Dates: From: <u>January 1, 2021</u>

Emission Limitation: 93.4 ppmv NOx db @ 0% O2 (7-day rolling avg)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

ABB LIMAS 11UV and ABB MAGNOS O2, SN: 3.240682.3 **Monitor Manufacturer and Model No.:**

Date of Latest CEMS Certification or Audit: 1/14/2021

Process Unit(s) Description: FCCU/CO Boiler Bypass, 0448020007P007

Total Source Operating Time in Reporting Period²: min

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due t	0:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes. Minutes of operation are defined a	s when FCC	U feed was in the unit and the CO Boiler bypass stack was in se	rvice.
Totale repetating period.	•	cent or greater of the total operating time or the total CMS dowr th the summary report form and the excess emission report sha	

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen Signature: Des Gillen 90F20640AD13450... Title: President - BP-Husky Refining LLC 26-May-21 Date:

¹ Form described in 40 CFR 60.7 (d)

			BP-HUS	BP-HUSKY REFINING		LC - FCC RI	EGEN VENT NO	CEMS REP	LLC - FCC REGEN VENT NOx CEMS REPORT 1ST QUARTER 2021	ER 2021	
	Requireme	Reporting Requirement (choose	ACTUAL		DEVIATION INFORMATION	NO NO		CORRECTIVE	WAS DEVIATION	MALFUNCTION VERBAL MALFUNCTION WRITTEN	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description		Semi-	METHOD USED TO DETERMINE	DEVIATION	DEVIATION DURATION	DESCRIPTION AND MAGNITUDE	DESCRIPTION PROBABLE CAUSE FOR AND MAGNITUDE THE DEVIATION	ACTIONS / PREVENTATIVE	MALFUNCTION? (Yes or No-		(If no reports were made, state
	Qualieny		Annual COMPLIANCE Date / Time Date / Time Start End	Date / Time Start	Date / Time End	OF THE DEVIATION		MEASURES TAKEN	If Yes, continue to the next column)	res, continue to the next no Reports in the space column) below)	No Reports in the space below)
P007 - FCCU /			Continuous								
CO Boiler Bypass	s Yes	8 N	Monitoring			Bypass St	ack not in operation during the	quarter, therefore no e	Bypass Stack not in operation during the quarter, therefore no excess emissions or part 60 CEMS downtime to report.	S downtime to report.	
Otack		_	System (CEMS)								

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Pollutant: SO₂

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

Reporting Period Dates:	From:	January 1	2021	To:	April 1, 2021	
Company:	BP-Husl	ky Refining	<u>LLC</u>			
Emission Limitation:	260 ppm	nvd SO2 at	0% exc	ess O2 as a	rolling 7-day average	
Address:	4001 Ce	edar Point F	Road, O	regon, Ohio	<u>43616</u>	
Monitor Manufacturer and Model No.:	ABB LIM	MAS 11UV	and ABI	B MAGNOS	O2, SN: 3.240685.3	
Date of Latest CEMS Certification or Audit:	1/14/202	21				
Process Unit(s) Description:	FCCU/C	O Boiler Byp	ass, 04	48020007P00	<u>07</u>	
Total Source Operating Time in Reporting Pe	eriod ² :	0	mi	<u>n</u>		
Emission Data Summary			CMS F	Perfomance	Summary	
1. Duration of excess emissions in reporting pe	eriod due t	:0:	1. CN	/IS downtime	e in reporting period due to:	
a. Start-up/Shutdown:		0	a.	Monitor eq	uipment malfunctions	0
b. Control equipment problems		0	b.	Non-monito	or equipment malfunctions	0
c. Process Problems		0	C.	Quality ass	urance calibration	0
d. Other known causes		0	d.	Other know	n causes	0
e. Unknown causes		0	e.	Unknown c	auses	0
2. Total duration of excess emissions		0	2. To	tal CEMS D	owntime	0
3. Total duration of excess emissions x (100) /		0	3. [To	otal CEMS D	owntime] x (100) / [Total source	0.00
[Total source operating time] %3				erating time		
² Record all times in minutes. Minutes of operation a						
³ For the reporting period: If the total duration of e	xcess emiss	sions is 1 per	cent or g	reater of the to	tal operating time or the total CMS down	time is 5

percent of greater of the total operating time, both the summary report form and the excess emission report shall be

Describe any changes since last quarter in CEMS, process, or controls.

submitted.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	DocuSigned by: Des Gillen
- (President - BP-Husky Refining LLC
Date:	26-May-21

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO₂

Company:

Reporting Period Dates:

¹ Form described in 40 CFR 60.7 (d)

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

To:

April 1, 2021

From: <u>January 1, 2021</u>

BP-Husky Refining LLC

Emission Limitation:	<u>160 ppm</u>	ivd SO2 at	0%	excess O2 as a rolling 365-day average	
Address:	4001 Ce	dar Point F	Road	l, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	ABB LIM	1AS 11UV	and	ABB MAGNOS O2, SN: 3.240685.3	
Date of Latest CEMS Certification or Audit:	1/14/202	21			
Process Unit(s) Description:	FCCU/C	O Boiler By	oass	0448020007P007	
Total Source Operating Time in Reporting Pe	eriod ² :	0		min	
					
Emission Data Summary			CN	S Perfomance Summary	
Duration of excess emissions in reporting per	eriod due t	o:	1.	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0		a. Monitor equipment malfunctions	0
b. Control equipment problems		0		b. Non-monitor equipment malfunctions	0
c. Process Problems		0		c. Quality assurance calibration	0
d. Other known causes		0		d. Other known causes	0
e. Unknown causes		0		e. Unknown causes	0
2. Total duration of excess emissions		0	2.	Total CMS Downtime	0
3. Total duration of excess emissions x (100) /		0	3.	[Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³			116	operating time] % ³ d was in the unit and the CO Boiler bypass stack was in se	
				d was in the unit and the CO Boiler bypass stack was in se or greater of the total operating time or the total CMS down	
				e summary report form and the excess emission report sha	
Describe any changes since last quarter in C	EMS, pro	cess, or c	ont	rols.	
, , ,		ŕ			
Not Applicable - No changes since the previous quarter.					
Not Applicable - No changes since the previous quarter.					
I certify that the information contained in this	s report is	s true, acc	urat	e, and complete.	
Name: Des Gillen			_		
Signature: Des Gillen					
90F20640AD13450			-		
Title: President - BP-Husky Refining LL	<u>.C</u>		_		
Date: 26-May-21					

Pollutant: SO ₂				
Reporting Period Dates:	From:	January 1, 2021	To:	April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 1,020 tons SO2 per rolling 12-month period

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS O2, SN: 3.240685.3

Date of Latest CEMS Certification or Audit: 1/14/2021

Process Unit(s) Description: FCCU/CO Boiler Bypass, 0448020007P007

Total Source Operating Time in Reporting Period²: 0 min

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to	0:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes. Minutes of operation are defined a	s when FCC	J feed was in the unit and the CO Boiler bypass stack was in se	rvice.
		cent or greater of the total operating time or the total CMS dowr th the summary report form and the excess emission report sha	

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	Docusigned by: Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	26-May-21

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO₂

Company:

Reporting Period Dates:

¹ Form described in 40 CFR 60.7 (d)

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

To:

April 1, 2021

From: <u>January 1, 2021</u>

BP-Husky Refining LLC

Emission Limitation:	0.92 lb S	O2 per 10	00 lb of fresh feed	
Address:	4001 Ce	dar Point F	Road, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	ABB LIM	IAS 11UV	and ABB MAGNOS O2, SN: 3.240685.3	
Date of Latest CEMS Certification or Audit:	1/14/202	21		
Process Unit(s) Description:	FCCU/C	D Boiler Byp	pass, 0448020007P007	
Total Source Operating Time in Reporting Pe	eriod ² :	0	min	
Emission Data Summary			CMS Perfomance Summary	
Duration of excess emissions in reporting per	riod due t	0:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	0
c. Process Problems		0	c. Quality assurance calibration	0
d. Other known causes		0	d. Other known causes	0
e. Unknown causes		0	e. Unknown causes	0
2. Total duration of excess emissions		0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /		0	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	1.6		operating time] % ³	<u> </u>
			U feed was in the unit and the CO Boiler bypass stack was in secent or greater of the total operating time or the total CMS down	
percent of greater of the submitted.	e total opera	iting time, bo	th the summary report form and the excess emission report sha	ıll be
Describe any changes since last quarter in C Not Applicable - No changes since the previous quarter.	EMS, pro	cess, or c	ontrols.	
I certify that the information contained in this	s report is	s true, acc	urate, and complete.	
Name: Des Gillen			_	
Signature: Du Gillen			-	
Title: President - BP-Husky Refining LL	С		-	
Date: 26-May-21				

			BP-HUS	BP-HUSKY REFINING		LC - FCC R	EGEN VENT SO2	CEMS REP	LLC - FCC REGEN VENT SO2 CEMS REPORT 1ST QUARTER 2021	ER 2021	
	Reporting Requirement (choose	rting nt (choose	ACTUAL		DEVIATIO INFORMATI	NO.		CORRECTIVE	WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION WRITTEN
EMISSIONS UNIT	1	Semi-	METHOD USED TO DETERMINE	DEVIATION DURATION	DURATION	DESCRIPTION AND MAGNITUDE	DESCRIPTION PROBABLE CAUSE FOR AND MAGNITUDE THE DEVIATION	ACTIONS / PREVENTATIVE	MALFUNCTION? (Yes or No-	MALENCTION (Yes or No - (if no reports were made, state (if no reports were made, state	(If no reports were made, state
	Quarterry	Annual	COMPLIANCE Date / Time Date / Time Start End	Date / Time Start	Date / Time End	OF THE DEVIATION		MEASURES TAKEN	If Yes, continue to the next column)	If res, continue to the next No Reports In the space column) below)	no Reports in the space below)
P007 - FCCU /			Continuous								
CO Boiler Bypass Stack	Yes	Š	Monitoring			Bypass St	tack not in operation during the	quarter, therefore no e	Bypass Stack not in operation during the quarter, therefore no excess emissions or part 60 CEMS downtime to report.	S downtime to report.	

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Po	lluta	nt:	CO

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 500 ppmv CO, db, 1-hr average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB URAS 26, SN: 3.347698.3

Date of Latest CEMS Certification or Audit: 1/12/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	60
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	60
3. Total duration of excess emissions x (100) /	0	3. Total CEMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³ ² Record all times in minutes.		operating time] % ³	
	ssions is 1 perc	ent or greater of the total operating time or the total CMS downtime is 5	percent or

For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen

President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

			BP-I	HUSKY F	BP-HUSKY REFINING	3 LLC - FCC	CO BOILER CO	CEMS REPOR	LLC - FCC/CO BOILER CO CEMS REPORT 1ST QUARTER 2021	2021	
	Reporting F (choose or	Reporting Requirement (choose one or both)	ACTUAL		DEVIATION INFORMATION	Z NO		COBBECTIVE ACTIONS	WAS DEVIATION	MALFUNCTION VERBAL MALFUNCTION WRITTEN PEDOPT DATE PEDOPT DATE	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description	1	Semi-		DEVIATION	DURATION	DEVIATION DURATION DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE	MALFUNCTION? (Yes or No-	(If no reports were made, state	MALFUNCTION? (Yes or No - (if no reports were made, state (if no reports were made, state
	Quarteny	Annual		Date / Time Start	Date / Time	COMPLIANCE Date / Time Date / Time OF THE DEVIATION Start End		MEASORES LAKEN	ir Yes, continue to the next column)	If Yes, continue to the next No Reports In the space column)	No Reports In the space below)
P007 - FCCU / CO Boiler Bypass Stack	Yes	o _N	Continuous Emissions 1/12/2021 at 1/12/2021 at Monitoring System 13:00 hours 14:00 hours (CEMS)	1/12/2021 at 13:00 hours	1/12/2021 at 14:00 hours	1/12/2021 at 1/12/2021 at CEMS downtime for 13:00 hours 14:00 hours 60 minutes	Cylinder Gas Audit (CGA).	Completed and passed CGA, recalibrated the analyzer and returned to service.	Ŷ.	V,A	N/A

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Pollutant: NOx

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 93.4 ppmv NOx db @ 0% O2 (7-day rolling avg)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 1/12/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period of	due to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	60
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	60
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen
Signature: Des Gillen
Des G

¹ Form described in 40 CFR 60.7 (d)

Pollutant: NOx

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 58.1 ppmv NOx db @ 0% O2 (365-day rolling avg)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 1/12/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	60
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	60
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:
Des Gillen

DocuSigned by:
Du Gillen

Title:
President - BP-Husky Refining LLC

Date:
26-May-21

Form described in 40 CFR 60.7 (d)

			BP-I	BP-HUSKY REFINING	ZEFININ		CO BOILER NO	X CEMS REPOR	LLC - FCC/CO BOILER NOx CEMS REPORT 1ST QUARTER 2021	2021		
	Ľ	teporting Requirement (choose one or both)	ACTUAL		DEVIATION INFORMATION	NO		COBBECTIVE ACTIONS	WAS DEVIATION	MALFUNCTION VERBAL PEDORT DATE	MALFUNCTION WRITTEN	
EMISSIONS UNIT ID/Description		-jw-S		DEVIATION	DURATION	DEVIATION DURATION DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION		MALFUNCTION? (Yes or No	=	(If no reports were made, state	
	Qualieny	Annual		Date / Time Start	Date / Time End	COMPLIANCE Date / Time OF THE DEVIATION Start End		MEASURES LAREN	ir res, continue to the next column)	No Reports. In the space below)	No Reports In the space below)	
P007 - FCCU /	>	ON	Continuous Emissions	1/12/2021 at	1/12/2021 at	1/12/2021 at 1/12/2021 at CEMS downtime for		Completed and passed CGA,	S	S/N	Š	_
Stack	8	2	Monitoring System 13:00 hours 14:00 hours (CEMS)	13:00 hours	14:00 hours	60 minutes	Cymraer Gas Audit (CGA).	returned to service.	2		Ć.	

Pollutant:	SO
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Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 260 ppmvd SO2 at 0% excess O2 as a rolling 7-day average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 1/12/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	60
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	60
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes.			
		ent or greater of the total operating time or the total CMS downtime is nary report form and the excess emission report shall be submitted.	5 percent or

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen

President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 160 ppmvd SO2 at 0% excess O2 as a rolling 365-day average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 1/12/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	60
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	60
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes.			
		ent or greater of the total operating time or the total CMS downtime is nary report form and the excess emission report shall be submitted.	5 percent or

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Signature: Des Gillen

90F20640AD13450...

Title: President - BP-Husky Refining LLC

Date: 26-May-21

Form described in 40 CFR 60.7 (d)

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 1,020 tons SO2 per rolling 12-month period

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 1/12/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CEMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	60
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	60
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes.			
³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.			

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen

Jus Gillen

900F20640AD13450...

Title: President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

Pollutant:	SO2
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Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 0.92 lb SO2 per 1000 lb of fresh feed

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 1/12/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 129,540 min

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	60
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	60
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes.			
		ent or greater of the total operating time or the total CMS downtime is nary report form and the excess emission report shall be submitted.	5 percent or

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen

Des Gillen

President - BP-Husky Refining LLC

Date: 26-May-21

¹ Form described in 40 CFR 60.7 (d)

			BP-+	IUSKY F	BP-HUSKY REFINING	FCC - FCC	CO BOILER SO	2 CEMS REPOR	LLC - FCC/CO BOILER SO2 CEMS REPORT 1ST QUARTER 2021	2021		
	Reporting F (choose or	Reporting Requirement (choose one or both)	ACTUAL		DEVIATION INFORMATION	NC.		COBBECTIVE ACTIONS	WAS DEVIATION	MALFUNCTION VERBAL MALFUNCTION WRITTEN	MALFUNCTION WRITTEN	
EMISSIONS UNIT Se ID/Description	1	i.	METHOD USED TO DETERMINE	DEVIATION	DURATION	DEVIATION DURATION DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE	2	(If no reports were made, state	(If no reports were made, state	
	Quarterly	nual	COMPLIANCE	Date / Time Start	Date / Time	COMPLIANCE Date / Time OF THE DEVIATION Start End		MEASURES LAREN	ir Yes, continue to the next column)	No reports in the space below)	INO Reports In the space below)	
P007 - ECC11 /			Continuous					Completed and passed				_
CO Boiler Bymaes	>	2	Emissions	1/12/2021 at	1/12/2021 at	Emissions 1/12/2021 at 1/12/2021 at CEMS downtime for	Cylinder Geo Audit (CA)	CGA, recalibrated the			V.N.	
Stack		2	Monitoring System 13:00 hours 14:00 hours	13:00 hours	14:00 hours	60 minutes	Cyllinder Gas Addit (CGA).	analyzer and returned to				
		_	(CEMS)					service.				_

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FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

Pollutant:	SO ₂
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Reporting Period Dates: From: <u>January 1, 2021</u> To: <u>April 1, 2021</u>

Company: BP-Husky Refining LLC

Emission Limitation: 250 ppm SO₂ dry, 0% excess O₂ (12-hour average)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: <u>Ametek Model 919, SN: ZB-919SP-10541-1</u>

Date of Latest CEMS Certification or Audit: 2/8/2021

Process Unit(s) Description: #1 Claus Sulfur Recovery Unit with SCOT Unit (0448020007P009)

Total Source Operating Time in Reporting Period²: 110,245 min

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1620
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	60
d. Other known causes	0	d. Other known causes	1200
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	2,880
3. Total duration of excess emissions x (100) /	0.00	3. [Total CEMS Downtime] x (100) / [Total source	2.61
[Total source operating time] % ³ ² Record all times in minutes.		operating time] % ³	

^{2 —}

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Signature: Des Gillen

Des Gillen

Des Gillen

President - BP-Husky Refining LLC

Date: 26-May-21

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

				3P-HUSK	Y REFINI	NG LLC SRU	#1 SO2 CEMS R	BP-HUSKY REFINING LLC SRU #1 SO2 CEMS REPORT FOR 1ST QUARTER 2021	UARTER 2021		
	_	Reporting Requirement (choose	ACTIIAI METHOD		DEVIATION INFORMATIC	N ON		CORRECTIVE ACTIONS /	WAS DEVIATION	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description	1	Semi-	USED TO DETERMINE		DEVIATION DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE MEASURES	MALFUNCTION? (Yes or No-	MALFUNCTION (Yes or No - (if no reports ere made, state (if no reports ere made, state	(If no reports were made, state
	Qualifering	Annual	COMPLIANCE	Date / Time Start	Date / Time End	OF THE DEVIATION		ANEIN	olumn)	NO REPORTS II the space NO REPORTS II the space below)	NO REPORTS IN the space below)
P009 - Sulfur Recovery Unit #1	Yes	ON	Continuous Emission Monitoring System (CEMS)	2/8/2021 at 10:00 hours	2/8/2021 at 11:00 hours	CEMS downtime for 60 minutes	Cylinder Gas Audit (CGA).	Completed and passed CGA, recalibrated the analyzer and returned to service.	ON	A/N	N/A
P009 - Sulfur Recovery Unit #1	Yes	oN	Continuous Emission Monitoring System (CEMS)	3/30/2021 at 07:00 hours	3/31/2021 at 10:00 hours	CEMS out-of-control time for 1620 minutes	Analyzer failed daily validation.	Recalibrated and returned the analyzer to service.	ON	N/A	N/A
P009 - Sulfur Recovery Unit #1	Yes	oN	Continuous Emission Monitoring System (CEMS)	3/15/2021 at 11:00 hours	3/15/2021 at 15:00 hours	CEMS downtime for 240 minutes	Quarterly / monthly preventative maintenance (PM).	Completed the PM, recalibrated the analyzer and returned to service.	ON	V/N	N/A
P009 - Sulfur Recovery Unit #1	Yes	No	Continuous Emission Monitoring System (CEMS)	3/15/2021 at 16:00 hours	3/16/2021 at 08:00 hours	CEMS downtime for 960 minutes	Analyzer was left on maintenance mode after a quarterly/monthly perventative maintenance (PM)	Analyzer was left on maintenance mode after a Switched the mode on the quarterly/monthly analyzer, recalibrated the perventative maintenance analyzer and returned to service. (PM)	Ŷ.	N/A	N/A

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 250 ppm SO₂ dry, 0% excess O₂ (12-hour average)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Ametek Model 919 and WDG-V, SN: ZX-919-10814-1

Date of Latest CEMS Certification or Audit: 2/8/2021

Process Unit(s) Description: Sulfur Recovery Units # 2 & #3 with TGT #2 (0448020007P037)

Total Source Operating Time in Reporting Period²: 129,344 min

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	1260
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	1140
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	2,400
3. Total duration of excess emissions x (100) /	0.00	3. [Total CEMS Downtime] x (100) / [Total source	1.86
[Total source operating time] % ³		operating time] % ³	
² Record all times in minutes.			
i or the reporting portion.		ercent or greater of the total operating time or the total CMS dow both the summary report form and the excess emission report sh	

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	26-May-21

¹ Form described in 40 CFR 60.7 (d)

			BP-	BP-HUSKY REFININ	EFINING I	LC SRU #2 &	SRU #3 SO2 CEMS RE	NG LLC SRU #2 & SRU #3 SO2 CEMS REPORT FOR 1ST QUARTER 2021	TER 2021		
	Reporting Requirement (choose one or both)	equirement te or both)	Reporting Requirement (choose one or both)		DEVIATION INFORMATION	NC.			WAS DEVIATION	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN
EMISSIONS UNIT ID / Description	Motorio	Semi-	TO DETERMINE	DEVIATION DURATION	DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No - (If no re	If no reports were made, state
	Qualiteriy	Annual	COMPLIANCE	Date / Time Start	Date / Time End	OF THE DEVIATION			oolumn)		No Reports in the space below)
P037 - Sulfur Recovery Units #2 	Yes	oN	Continuous Emission Monitoring System (CEMS)	1/21/2021 at 19:00 hours	1/22/2021 09:00 hou	at CEMS downtime for rs 840 minutes	Programmable logic controller (PLC) locked up resulting in irretrievable data.	Resetted the power on the PLC, recalibrated the analyzer and returned to service.	o Z	N/A	N/A
P037 - Sulfur Recovery Units #2 	Yes	oN.	Continuous Emission Monitoring System (CEMS)	2/5/2021 at 12:00 hours	2/6/2021 at 09:00 hours	CEMS downtime for 1260 minutes	Analyzer sample system line froze.	Cleared line, recalibrated the analyzer and returned to service.	o _N	N/A	N/A
P037 - Sulfur Recovery Units #2 	yes	oN	Continuous Emission Monitoring System (CEMS)	3/24/2021 at 10:00 hours	3/24/2021 at 15:00 hours	CEMS downtime for 300 minutes	Replaced lamps and cleaned optical bench.	Recalibrated and returned the analyzer to service.	o _N	N/A	A/N

Additional Information Required under PTI # 04-1046

1. Total SO₂ emissions during calendar quarter (in tons), including any excess emissions attributed to the malfunction, startup, or shutdown of emissions unit P037. (ST&C III.A.iii)

Total SO₂ emissions from the TRP SRUs during the period January 1, 2021 through March 31, 2021 were calculated at 5.69 tons.

2. Total operating time of the CEMS while either SRU was online. (ST&C III.A.iii)

During the quarter, the total source operating time while either or both SRUs were in service was 2,155 hours. The CEMS was online and monitoring for 2,116 hours while either SRU was in service.

During the quarter, there were three (3) periods of CEMS downtime for a total duration of 40 hours. Details of these events are summarized in the table attached.

3. Quantification of emissions routed from the SRU to the flare beginning with activation of the relief valve until the release is over. (ST&C VII.A)

For the 1st quarter, there were two periods during the quarter when acid gas was sent to the TRP Acid Gas flare:

Period 1

- Duration: 3/20/2021 11:25 11:29 (4 minutes)
- Quantity (SO₂): 476 lbs.

Period 2

- Duration: 3/20/2021 12:04 12:08 (4 minutes)
- Quantity (SO₂): 119 lbs.

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

Pο	lluta	nt:	NOx

Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS O2

Monitor Location: Sample port on East Alstom Boiler Stack; monitor housed at ground level in an

analyzer building adjacent the boiler.

Date of Latest CMS Cert or Audit: 1/19/2021

Process Unit(s) Description: East Alstom Boiler (0448020007B034)

Total Source Operating Time in Reporting Period: 129,535 min (TIU fuel gas was combusted for 112,684 minutes and natural gas was combusted for 16,851 minutes for a total of

129,535 minutes this quarter)

CMS operating time while emission unit was in operation: 129,475 min
Emission Limitation: 12.71 lb/hr of NO_x emissions;

38.5 tons/rolling 12-month period of NO_x emissions (combined B034 & B035);

0.10 lb NO_x (as NO₂) per mmBtu heat input 30-day rolling average

	CMS Perfomance Summary	
ue to:	CMS downtime in reporting period due to:	
0	a. Monitor equipment malfunctions	0
0	b. Non-monitor equipment malfunctions	0
0	c. Quality assurance calibration	60
0	d. Other known causes	0
0	e. Unknown causes	0
0	2. Total CEMS Downtime	60
0	3. [Total CMS Downtime] x (100) / [Total source	0.05
	operating time] % ³	0.05
•		
	0 0 0 0 0 0	0 a. Monitor equipment malfunctions 0 b. Non-monitor equipment malfunctions 0 c. Quality assurance calibration 0 d. Other known causes 0 e. Unknown causes 0 2. Total CEMS Downtime 0 3. [Total CMS Downtime] x (100) / [Total source

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - No changes since last quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	Des Gillen
Γitle:	President - BP-Husky Refining LLC
Date:	26-May-21

¹ Form described in 40 CFR 60.7 (d)

BP-HUSKY REFINING LLC - EAST ALSTOM BOILER NOx CEMS REPORT FOR 1ST QUARTER 2021

	Reporting Requirement (ch	esoc	ACTUAL		DEVIATION INFORMATION		PPORABIE CALISE	0	WAS DEVIATION	MALFUNCTION VERBAL MALFUNCTION WRITTEN	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description	1	Semi-	METHOD USED DEVIATION DURATION AN TO DETERMINE	DEVIATION	DURATION	ESCRIPTION D MAGNITUDE		ACTIONS / PREVENTATIVE	MALFUNCTION? (Yes or No-	MALFUNCTION? (See No - (if no reports were made, state (if no reports were made, state	(If no reports were made, state
	Kual telly	Annual	COMPLIANCE	Date / Time Start	Date / Time End	OF THE DEVIATION	NO	MEASURES TAKEN	column)	column) below) below)	below)
B034 - Eest Alstom Boiler	Yes	ON.	Continuous Monitoring System	1/19/2021 at 11:00 hours	1/19/2021 at 12:00 hours	at 1/19/2021 at CEMS downtime for Cylinder Gas Audit for 12:00 hours 60 minutes (CGA).		Completed and passed CGA, recalibrated the analyzer and returned to service.	2	N/A	N/A

East Alstom Boiler - 1st Quarter 2021 Db Data

NSPS Db: Supplemental Reporting for NO_x CEM Records as required by 40 CFR 49b(i)

This table contains the information required by 60.49(g)(1-8).

Records for (g)(9-10) are provided in the NSPS Quarterly CEMS Report.

East Alstom Boiler (B034): 353 MMBtu/hr heater fired with refinery fuel gas and/or natural gas

Calculation Methodology: NO_x emissions (lb/mmbtu) calculated from NO_x CEM (ppm) using Methodology in 40 CFR 60 Appendix A Method 19 and F factor of 8710 dscf/mmbtu from Method 19 Table 19-1 when natural gas fired; site-specific F factor determined from fuel analysis when refinery fuel gas fired.

NSPS Limit: 0.10 lb NO_x/MMBtu

NOT O Ellinic 0.10 ib NO _X /iminbcu								
Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions			
1/1/2021	0.016	0.016	No	No				
1/2/2021	0.016	0.016	No	No				
1/3/2021	0.016	0.016	No	No				
1/4/2021	0.016	0.016	No	No				
1/5/2021	0.016	0.016	No	No				
1/6/2021	0.016	0.016	No	No				
1/7/2021	0.017	0.016	No	No				
1/8/2021	0.019	0.016	No	No				
1/9/2021	0.020	0.017	No	No				
1/10/2021	0.021	0.017	No	No				
1/11/2021	0.022	0.018	No	No				
1/12/2021	0.021	0.018	No	No				
1/13/2021	0.019	0.018	No	No				
1/14/2021	0.019	0.018	No	No				
1/15/2021	0.017	0.018	No	No				
1/16/2021	0.017	0.018	No	No				
1/17/2021	0.017	0.018	No	No				
1/18/2021	0.021	0.018	No	No				
1/19/2021	0.022	0.018	No	No				
1/20/2021	0.021	0.018	No	No				
1/21/2021	0.022	0.019	No	No				
1/22/2021	0.021	0.019	No	No				
1/23/2021	0.022	0.019	No	No				
1/24/2021	0.022	0.019	No	No				
1/25/2021	0.022	0.019	No	No				
1/26/2021	0.020	0.019	No	No				
1/27/2021	0.019	0.019	No	No				
1/28/2021	0.019	0.019	No	No				
1/29/2021	0.021	0.019	No	No				
1/30/2021	0.022	0.019	No	No				
1/31/2021	0.021	0.019	No	No				
2/1/2021	0.019	0.020	No	No				
2/2/2021	0.022	0.020	No	No				
2/3/2021	0.022	0.020	No	No				
2/4/2021	0.023	0.020	No	No				
2/5/2021	0.026	0.020	No	No				
2/6/2021	0.020	0.021	No	No				
2/7/2021	0.027	0.021		No				
2/8/2021	0.027	0.021	No No	No				
2/9/2021	0.027	0.021	No	No				
2/10/2021	0.026	0.022	No	No				
2/11/2021	0.025	0.022	No	No				
2/11/2021	0.027	0.022	No No	No				
	0.027			No No				
2/13/2021		0.022	No No					
2/14/2021	0.025	0.023	No No	No No				
2/15/2021	0.025	0.023	No No	No No				
2/16/2021	0.027	0.023	No No	No No				
2/17/2021	0.026	0.023	No No	No				
2/18/2021	0.025	0.023	No No	No No				
2/19/2021	0.024	0.024	No No	No				
2/20/2021	0.022	0.024	No No	No				
2/21/2021	0.021	0.024	No No	No				
2/22/2021	0.021	0.024	No	No				
2/23/2021	0.021	0.023	No	No				
2/24/2021	0.020	0.023	No	No				
2/25/2021	0.020	0.023	No	No				

Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
2/26/2021	0.020	0.023	No	No	
2/27/2021	0.020	0.023	No	No	
2/28/2021	0.018	0.023	No	No	
3/1/2021	0.018	0.023	No	No	
3/2/2021	0.020	0.023	No	No	
3/3/2021	0.019	0.023	No	No	
3/4/2021	0.019	0.023	No	No	
3/5/2021	0.019	0.023	No	No	
3/6/2021	0.019	0.023	No	No	
3/7/2021	0.020	0.023	No	No	
3/8/2021	0.020	0.022	No	No	
3/9/2021	0.021	0.022	No	No	
3/10/2021	0.024	0.022	No	No	
3/11/2021	0.020	0.022	No	No	
3/12/2021	0.018	0.022	No	No	
3/13/2021	0.020	0.021	No	No	
3/14/2021	0.020	0.021	No	No	
3/15/2021	0.021	0.021	No	No	
3/16/2021	0.021	0.021	No	No	
3/17/2021	0.021	0.021	No	No	
3/18/2021	0.023	0.021	No	No	
3/19/2021	0.024	0.021	No	No	
3/20/2021	0.018	0.020	No	No	
3/21/2021	0.017	0.020	No	No	
3/22/2021	0.020	0.020	No	No	
3/23/2021	0.020	0.020	No	No	
3/24/2021	0.020	0.020	No	No	
3/25/2021	0.016	0.020	No	No	
3/26/2021	0.017	0.020	No	No	
3/27/2021	0.015	0.020	No	No	
3/28/2021	0.014	0.019	No	No	
3/29/2021	0.016	0.019	No	No	
3/30/2021	0.018	0.019	No	No	
3/31/2021	0.018	0.019	No	No	

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

Po	lluta	ınt:	Ν	Ox
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Reporting Period Dates: From: January 1, 2021 To: April 1, 2021

Company: BP-Husky Refining LLC

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS O2

Monitor Location: Sample port on West Alstom Boiler Stack; monitor housed at ground level in an

analyzer building adjacent the boiler.

Date of Latest CMS Certification or Audit: 1/19/2021

Process Unit(s) Description: West Alstom Boiler (0448020007B035)

(TIU fuel gas was combusted for 0 minutes and natural gas

Total Source Operating Time in Reporting Period: 129,536 min was combusted for 129,536 minutes for a total of 129,536

minutes this quarter)

CMS operating time while emission unit was in operation: 129,476 min

Emission Limitation: 12.71 lb/hr of NO_x emissions;

38.5 tons/rolling 12-month period of NO_x emissions (combined B034 & B035);

0.10 lb NO_x (as NO₂) per mmBtu heat input 30-day rolling average

Emission Data Summary		CMS Perfomance Summary			
1. Duration of excess emissions in reporting period of	lue to:	CMS downtime in reporting period due to:			
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0		
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0		
c. Process Problems	0	c. Quality assurance calibration	60		
d. Other known causes 0		d. Other known causes	0		
e. Unknown causes 0		e. Unknown causes	0		
Total duration of excess emissions		2. Total CEMS Downtime	60		
3. Total duration of excess emissions x (100) /		3. [Total CMS Downtime] x (100) / [Total source	0.05		
[Total source operating time] %3	0	operating time] % ³	0.05		
² Record all times in minutes.					
³ For the reporting period: If the total duration of excess e	missions is 1	percent or greater of the total operating time or the total CMS dow	ntime is 5		

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - No changes since last quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

Docusigned by:

Dis Gillen

90F20640AD13450...

Title:

President - BP-Husky Refining LLC

Date:

26-May-21

¹ Form described in 40 CFR 60.7 (d)

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EMISSIONS UNI ID/Description B035 - West Alstom Boiler

West Alstom Boiler - 1st Quarter 2021 Db Data

NSPS Db: Supplemental Reporting for NO_x CEM Records as required by 40 CFR 49b(i)

This table contains the information required by 60.49(g)(1-8).

Records for (g)(9-10) are provided in the NSPS Quarterly CEMS Report.

West Alstom Boiler (B035): 353 MMBtu/hr heater fired with refinery fuel gas and/or natural gas

Calculation Methodology: NO_x emissions (lb/mmbtu) calculated from NO_x CEM (ppm) using Methodology in 40 CFR 60 Appendix A Method 19 and F factor of 8710 dscf/mmbtu from Method 19 Table 19-1 when natural gas fired; site-specific F factor determined from fuel analysis when refinery fuel gas fired.

NSPS Limit: 0.10 lb NO₂/MMBtu

Date average NOX average NOX Emissions CEM Span? Data, or Exc	on for Missing or Invalid
(ID/MINDLU) (ID/MINDLU) (yes/no)	cess Emissions
1/1/2021 0.015 0.015 No No	
1/2/2021 0.016 0.015 No No	
1/3/2021 0.015 0.015 No No	
1/4/2021 0.015 0.015 No No	
1/5/2021 0.015 0.015 No No	
1/6/2021 0.015 0.015 No No	
1/7/2021 0.014 0.015 No No	
1/8/2021 0.016 0.015 No No	
1/9/2021 0.018 0.015 No No	
1/10/2021 0.019 0.016 No No	
1/11/2021 0.020 0.016 No No	
1/12/2021 0.019 0.016 No No	
1/13/2021 0.017 0.016 No No	
1/14/2021 0.018 0.016 No No	
1/15/2021 0.018 0.017 No No	
1/16/2021 0.018 0.017 No No	
1/17/2021 0.018 0.017 No No	
1/18/2021 0.019 0.017 No No	
1/19/2021 0.019 0.017 No No	
1/20/2021 0.019 0.017 No No	
1/21/2021 0.018 0.017 No No	
1/2/2021 0.016 0.017 No No	
1/23/2021 0.017 0.017 No No	
1/23/2021 0.017 0.017 NO NO NO	
1/31/2021 0.023 0.018 No No No 2/1/2021 0.021 0.018 No No	
2/3/2021 0.022 0.019 No No	
2/4/2021 0.022 0.019 No No	
2/5/2021 0.023 0.019 No No	
2/6/2021 0.023 0.019 No No	
2/7/2021 0.023 0.020 No No	
2/8/2021 0.023 0.020 No No	
2/9/2021 0.023 0.020 No No	
2/10/2021 0.022 0.020 No No	
2/11/2021 0.022 0.020 No No	
2/12/2021 0.024 0.020 No No	
2/13/2021 0.021 0.020 No No	
2/14/2021 0.020 0.021 No No	
2/15/2021 0.020 0.021 No No	
2/16/2021 0.020 0.021 No No	
2/17/2021 0.020 0.021 No No	
2/18/2021 0.019 0.021 No No	
2/19/2021 0.021 No No	
2/20/2021 0.021 0.021 No No	
2/21/2021 0.020 0.021 No No	
2/22/2021 0.017 0.021 No No	
2/23/2021 0.017 0.021 No No	
2/24/2021 0.017 0.021 No No	
2/25/2021 0.019 0.021 No No	
2/26/2021 0.019 0.021 No No	

Date	Hourly daily average NOx (Ib/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
2/27/2021	0.018	0.021	No	No	
2/28/2021	0.017	0.021	No	No	
3/1/2021	0.019	0.021	No	No	
3/2/2021	0.019	0.021	No	No	
3/3/2021	0.018	0.020	No	No	
3/4/2021	0.019	0.020	No	No	
3/5/2021	0.020	0.020	No	No	
3/6/2021	0.020	0.020	No	No	
3/7/2021	0.019	0.020	No	No	
3/8/2021	0.018	0.020	No	No	
3/9/2021	0.021	0.020	No	No	
3/10/2021	0.023	0.020	No	No	
3/11/2021	0.022	0.020	No	No	
3/12/2021	0.023	0.020	No	No	
3/13/2021	0.023	0.020	No	No	
3/14/2021	0.023	0.020	No	No	
3/15/2021	0.023	0.020	No	No	
3/16/2021	0.023	0.020	No	No	
3/17/2021	0.023	0.020	No	No	
3/18/2021	0.024	0.020	No	No	
3/19/2021	0.024	0.020	No	No	
3/20/2021	0.023	0.021	No	No	
3/21/2021	0.022	0.021	No	No	
3/22/2021	0.022	0.021	No	No	
3/23/2021	0.022	0.021	No	No	
3/24/2021	0.022	0.021	No	No	
3/25/2021	0.022	0.021	No	No	
3/26/2021	0.022	0.021	No	No	
3/27/2021	0.022	0.021	No	No	
3/28/2021	0.022	0.021	No	No	
3/29/2021	0.023	0.022	No	No	
3/30/2021	0.023	0.022	No	No	
3/31/2021	0.024	0.022	No	No	

Attachment B – Data Assessment Report

Data Assessment Report - East Side Fuel Gas Mix Drum H2S CMS

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B008, B009, B010

CEMS Manufacturer: Siemens		<i>Model #:</i> Maxim		CEMS S 3002	<i>erial #:</i> 28039490020
CEMS type: Hydrogen Sulf	ide	CEMS	sampling loc East Side		Mix Drum
CEMS span values as per the applicat		ble regulati	ion:		
PPM		<u>1</u>			<u>Percent</u>
SO ₂			O ₂		
H ₂ S	300		CO ₂		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for:

		Vivicom	PI
1.	Date of audit:	3/18/21	3/18/21
2.	Reference method (RM) used:	Method 15	Method 15
3.	Average RM value:	4.16	4.16
4.	Average CEMS value:	6.47	6.14
5.	Absolute value of mean difference:	2.31	1.98
6.	Confidence coefficient:	0.276	0.278
7.	Percent relative accuracy: (based on applicable standard)	1.60	1.40

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

- B. Cylinder gas audit (CGA) for H₂S (ppm): (Not Applicable this quarter)
- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods.
 - a. Dates:
- None
- b. Number of days: NA
- 2. Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - TIU Fuel Gas Mix Drum H2S CMS

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B015, B017, B019, B022, B029, B030, B031, B032, B033, B035,

P007

CEMS Manufacturer: Siemens	Model #: Maxim II		-	Serial #: 020117999300
CEMS type: Hydrogen Sulfide		CEMS sampling location: TIU Fuel Gas Mix Drum		
CEMS span values as	per the applicable regulat	ion:		
	<u>PPM</u>			<u>Percent</u>
SO ₂		O ₂		
H₂S	300	CO ₂		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for:

		Vivicom	PI
1.	Date of audit:	3/10/21	3/10/21
2.	Reference method (RM) used:	Method 15	Method 15
3.	Average RM value:	4.75	4.75
4.	Average CEMS value:	2.93	2.60
5.	Absolute value of mean difference:	1.82	2.15
6.	Confidence coefficient:	0.475	0.473
7.	Percent relative accuracy: (based on applicable standard)	1.42	1.62

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		-

^{*}To be completed by the Agency

- B. Cylinder gas audit (CGA) for H₂S (ppm): (Not Applicable this quarter)
- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods.
 - a. Dates:
- None
- b. Number of days: NA
- 2. Corrective action taken:
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

NA

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report - Reformer 3 Heater H₂S CMS

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC **Plant name:** Toledo Refinery

Source unit #: B036

CEMS Manufacturer: Siemens		Model #: CEMS S Maxim II		Serial #: 30029994471080	
CEMS type: Hydrogen Sulfide		CEMS sampling location: Reformer 3 Heater Fuel Gas			as
CEMS span values as p	CEMS span values as per the applicable regulation:				
		<u>PPM</u>			<u>Percent</u>
SO ₂			O ₂		
H₂S		300	CO ₂		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for:

		Vivicom	PI
1.	Date of audit:	3/11/21	3/11/21
2.	Reference method (RM) used:	Method 15	Method 15
3.	Average RM value:	2.32	2.32
4.	Average CEMS value:	1.03	1.24
5.	Absolute value of mean difference:	1.29	1.07
6.	Confidence coefficient:	0.705	0.692
7.	Percent relative accuracy: (based on applicable standard)	1.23	1.09

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

- B. Cylinder gas audit (CGA) for H₂S (ppm): (Not Applicable this quarter)
- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods.
 - a. Dates:
- None
- b. Number of days: NA
- 2. Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report - East Flare H2S CMS

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P003

CEMS Manufacturer: Siemens		Model #: Maxim II		CEMS	S Serial #: 30050531960100
CEMS type: Hydrogen Sulfide		CEMS sampling location: East Flare			
CEMS span values as per the applicable regulation:					
		<u>PPM</u>			<u>Percent</u>
SO ₂			O ₂		
H₂S		300	CO ₂		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for:

		Vivicom	PI
1.	Date of audit:	3/17/21	3/17/21
2.	Reference method (RM) used:	Method 15	Method 15
3.	Average RM value:	15.15	15.15
4.	Average CEMS value:	24.70	24.70
5.	Absolute value of mean difference:	9.55	9.55
6.	Confidence coefficient:	1.325	1.393
7.	Percent relative accuracy: (based on applicable standard)	6.71	6.75

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

- B. Cylinder gas audit (CGA) for H₂S (ppm): (Not Applicable this quarter)
- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
- 2. Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - West Flare H₂S CMS

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC **Plant name:** Toledo Refinery

Source unit #: P004

CEMS Manufacturer: Siemens		Model #: Maxim II		CEMS	S Serial #: 30050531960400
CEMS type: Hydrogen Sulfide		CEMS sampling location: West Flare			
CEMS span values as per the applicable regulation:					
		<u>PPM</u>			<u>Percent</u>
SO ₂			O ₂		
H₂S		300	CO ₂		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for:

		Vivicom	PI
1.	Date of audit:	3/9/21	3/9/21
2.	Reference method (RM) used:	Method 15	Method 15
3.	Average RM value:	0.79	0.79
4.	Average CEMS value:	0.55	0.54
5.	Absolute value of mean difference:	0.24	0.26
6.	Confidence coefficient:	0.162	0.147
7.	Percent relative accuracy: (based on applicable standard)	0.24	0.24

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

- B. Cylinder gas audit (CGA) for H₂S (ppm): (Not Applicable this quarter)
- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods.
 - a. Dates:
- None
- b. Number of days: NA
- 2. Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report - East Flare TS CMS

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC **Plant name:** Toledo Refinery

Source unit #: P003

CEMS Manufacturer: ThermoFisher		Model #: Sola II		CEMS Serial #: SL-10430115
CEMS type: Total Sulfur		CEMS sampling location: East Flare		
CEMS span values as	CEMS span values as per the applicable regula		tion:	
		<u>PPM</u>		
TS (low)		3,500		
TS (high)		350,000		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for: (Not Applicable)

B. Cylinder gas audit (CGA) for TS Low (ppm) and TS High (ppm):

	TS	Low	TS High		
	Audit #1	Audit #2	Audit #1	Audit #2	
1. Date of audit	1/20/2021	1/20/2021	1/20/2021	1/20/2021	
2. Cylinder ID number	CC427785	CC475560	CC121778	CC706892	
Vendor	Airgas	Airgas	Airgas	Airgas	
3. Date of certification	3/13/2019	3/31/2020	3/18/2019	2/6/2019	
Expiration date	3/13/2022	3/31/2023	3/18/2022	2/6/2022	
4. Type of certification	RATA Class	RATA Class	RATA Class	EPA Protocol	
5. Certified audit value	884.0	1,898	87,110	189,700	
6. CEMS response values	884.7	1,917	86,909	188,709	
	887.4	1,924	86,181	186,809	
	885.2	1,916	87,041	186,381	
Average	885.8	1,919.0	86,710	187,300	
7. Accuracy	0.20%	1.11%	-0.46%	-1.27%	

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.

a. Dates: None

b. Number of days: NA

- 2. Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - West Flare TS CMS

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC **Plant name:** Toledo Refinery

Source unit #: P004

CEMS Manufacturer: ThermoFisher		Model #: Sola II		CEMS Serial #: SL-10440115		
CEMS type: Total Sulfur		CEMS sampling location: West Flare				
CEMS span values as	alues as per the applicable regula		tion:			
		<u>PPM</u>				
TS (low)		3,500				
TS (high)		350,000				

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for: (Not Applicable)

B. Cylinder gas audit (CGA) for TS Low (ppm) and TS High (ppm):

	TS	Low	TS High		
	Audit #1	Audit #2	Audit #1	Audit #2	
1. Date of audit	1/22/2021	1/22/2021	1/22/2021	1/22/2021	
2. Cylinder ID number	CC315721	CC115212	CC62361	AAL070367	
Vendor	Airgas	Airgas	Airgas	Airgas	
3. Date of certification	3/13/2019	11/11/2019	3/18/2019	3/7/2019	
Expiration date	3/13/2022	11/11/2022	3/18/2027	3/7/2027	
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class	
Certified audit value	884.3	1,940.0	86,970	192,500	
6. CEMS response values	892.9	1,973.6	87,415	189,250	
	890.5	1,972.8	87,186	189,789	
	890.9	1,992.3	87,424	190,412	
Average	891.4	1,979.6	87,342	189,817	
7. Accuracy	0.80%	2.04%	0.43%	-1.39%	

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.

a. Dates: None

b. Number of days: NA

- 2. Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

Data Assessment Report – TIU Fuel Gas Mix Drum TS CMS

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC **Plant name:** Toledo Refinery

Source unit #: B015, B017, B019, B022, B029, B030, B031, B032, B033, B034

B035, P007

CEMS Manufacturer: ThermoFisher		<i>Model #:</i> Sola II			
CEMS type: Total Sulfur		CEMS sampling TIL	<i>g location:</i> J Fuel Gas Mix Drum		
CEMS span values as	CEMS span values as per the applicable regula				
		<u>PPM</u>			
TS		3,500			

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for:

	TS (ppm)
	Audit #1	Audit #2
1. Date of audit	1/25/2021	1/25/2021
2. Cylinder ID number	CC338715	CC218822
Vendor	Airgas	Airgas
3. Date of certification	3/13/2019	3/31/2020
Expiration date	3/13/2022	3/31/2023
4. Type of certification	RATA Class	RATA Class
5. Certified audit value	884.70	1844.00
6. CEMS response values	927.00	1843.80
	928.60	1839.80
	928.00	1846.00
Average	927.87	1843.20
7. Accuracy	4.88%	-0.04%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - Reformer 3 Heater NO_x/O₂ CEM

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B036

O ₂ CEMS Manufacturer: ABB			Model #: CEI MAGNOS 106		MS Serial # 3.340932.7
NO _x CEMS Manufacture ABB			del #: CEN LIMAS 11		MS Serial # 3.340287.1
CEMS sampling location	: Reformer 3 Heate	r stad	ck		
CEMS span values as per the applicable regulation:			on:		
	<u>PPM</u>				<u>Percent</u>
SO ₂			O ₂		25
NO _x	200		CO ₂		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for: (Not Applicable)

B. Cylinder gas audit (CGA) for O2 (%) and NOx (ppm):

	02	(%)	NOx (ppm)		
	Audit #1	Audit #2	Audit #1	Audit #2	
1. Date of audit	1/12/2021	1/12/2021	1/12/2021	1/12/2021	
2. Cylinder ID number	CC278207	BLM001313	BLM003126	LL10026	
Vendor	Airgas	Scott	Scott	Airgas	
3. Date of certification	11/20/2017	11/12/2013	10/21/2013	11/12/2019	
Expiration date	11/20/2025	11/13/2021	10/22/2021	11/12/2027	
Type of certification	RATA Class	RATA Class	RATA Class	RATA Class	
5. Certified audit value	5.97	13.90	50.40	117.20	
6. CEMS response values	5.91	14.05	45.23	113.13	
	5.93	14.05	45.64	113.56	
	5.93	14.05	45.84	113.88	
Average	5.92	14.05	45.57	113.52	
7. Accuracy	-0.84%	1.08%	-9.58%	-3.14%	

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods: None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – East Alstom Boiler NO_x/O₂ CEM

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B034

O ₂ CEMS Manufacturer: ABB					MS Serial # 0400003357006	
NO _x CEMS Manufacture ABB			del #: LIMAS 11	l .	MS Serial # 0400003362206	
CEMS sampling location	: East Alstom Boiler	stac	k			
CEMS span values as p	er the applicable reg	ulatio	n:			
	<u>PPM</u>				<u>Percent</u>	
SO ₂			O ₂		20.0	
NO _x	100	·	CO ₂			

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)

B. Cylinder gas audit (CGA) for O₂ (%):

		O ₂	
	Audit #1	Audit #2	Audit #3
1. Date of audit	1/19/2021	1/19/2021	1/19/2021
2. Cylinder ID number	BLM005117	BAL5136	XC029674B
Vendor	Airgas	Air Liquide	Airgas
3. Date of certification	5/22/2020	8/30/2020	1/28/2019
Expiration date	5/22/2028	8/30/2024	1/28/2027
4. Type of certification	RATA Class	RATA Class	RATA Class
5. Certified audit value	5.55	11.00	18.10
6. CEMS response values	5.50	11.06	18.16
	5.52	11.07	18.16
	5.52	11.07	18.15
Average:	5.51	11.07	18.16
7. Accuracy	-0.72%	0.64%	0.33%

Cylinder gas audit (CGA) for NO_x (ppm):

		NOx	
	Audit #1	Audit #2	Audit #3
1. Date of audit	1/19/2021	1/19/2021	1/19/2021
2. Cylinder ID number	BAL5293	XL000366B	ALM020313
Vendor	Air Liquide	Airgas	Airgas
3. Date of certification	11/2/2018	11/21/2017	3/6/2020
Expiration date	11/2/2021	11/21/2025	3/6/2028
Type of certification	RATA Class	RATA Class	RATA Class
5. Certified audit value	23.53	54.79	91.10
6. CEMS response values	25.34	56.85	92.40
	24.09	56.33	92.50
	25.44	56.61	91.46
Average:	24.96	56.60	92.12
7. Accuracy	6.08%	3.30%	1.12%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – West Alstom Boiler NO_x/O₂ CEM

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B035

O ₂ CEMS Manufacturer: ABB		Model #: MAGNOS 106	-	MS Serial # 100003354606	
NO _x CEMS Manufacturer: ABB		Model #: LIMAS 11	I -	MS Serial # I00003361106	
CEMS sampling location: West Alstom Boiler stack					
CEMS span values as per the applicable regulation:					
	<u>PPM</u>			<u>Percent</u>	
SO ₂		O ₂		20.0	
NO _x	100	CO	2		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for O₂ (%):

	O ₂			
	Audit #1	Audit #2	Audit #3	
1. Date of audit	1/19/2021	1/19/2021	1/19/2021	
2. Cylinder ID number	BLM005117	BAL5136	XC029674B	
Vendor	Airgas	Air Liquide	Airgas	
3. Date of certification	5/22/2020	8/30/2020	1/28/2019	
Expiration date	5/22/2028	8/30/2024	1/28/2027	
4. Type of certification	RATA Class	RATA Class	RATA Class	
5. Certified audit value	5.55	11	18.1	
6. CEMS response values	5.55	11.09	18.17	
	5.56	11.10	18.17	
	5.56	11.10	18.17	
Average:	5.56	11.10	18.17	
7. Accuracy	0.18%	0.91%	0.39%	

Cylinder gas audit (CGA) for NO_x (ppm):

	NO _x			
	Audit #1	Audit #2	Audit #3	
1. Date of audit	1/19/2021	1/19/2021	1/19/2021	
2. Cylinder ID number	BAL5293	XL000366B	ALM020313	
Vendor	Air Liquide	Airgas	Airgas	
3. Date of certification	11/2/2018	11/21/2017	3/6/2020	
Expiration date	11/2/2021	11/21/2025	3/6/2028	
4. Type of certification	RATA Class	RATA Class	RATA Class	
5. Certified audit value	23.53	54.79	91.1	
6. CEMS response values	24.66	54.83	89.33	
	25.03	54.65	88.88	
	25.03	54.79	88.90	
Average:	24.91	54.76	89.04	
7. Accuracy	5.86%	-0.05%	-2.26%	

- **C.** Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – FCC/CO Boiler SO₂/NO_x/CO/O₂ CEM

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P007

O ₂ CEMS Manufacturer: ABB		Model #: Magno	Model #: (Magnos 106		CEMS Serial # 3.340569.7	
SO ₂ CEMS Manufacturer: ABB		Model #: Limas 11 UV		CEMS Serial # 3.340641.7		
NO _x CEMS Manufacturer:		Model #:		CEMS Serial #		
ABB		Limas 11 UV		3.340641.7		
CO CEMS Manufacturer:		Model #: URAS- 26		CEMS Serial #		
ABB Automation				3.347698.3		
CEMS sampling location: CO Boiler stack						
CEMS span values as per the applicable regulation:						
SO ₂	400 PPM		O ₂		10.0 %	
NO _x	350 PPM	со			1000 PPM	

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for O_2 (%) and SO_2 (ppm):

	O ₂ (pe	ercent)	SO ₂ (ppm)		
	Audit #1	Audit #2	Audit #1	Audit #2	
1. Date of audit	1/12/2021	1/12/2021	1/12/2021	1/12/2021	
2. Cylinder ID number	ALM001730	CC423357	ALM001730	CC423357	
Vendor	Scott	Airgas	Scott	Airgas	
3. Date of certification	2/14/2017	2/14/2017	2/14/2017	2/14/2017	
Expiration date	2/14/2025	2/14/2025	2/14/2025	2/14/2025	
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class	
5. Certified audit value	2.49	5.53	98.98	219.40	
6. CEMS response values	2.48	5.41	97.47	219.23	
	2.47	5.41	98.76	216.73	
	2.47	5.40	97.44	216.55	
Average	2.47	5.41	97.89	217.50	
7. Accuracy	-0.80%	-2.17%	-1.10%	-0.87%	

B. Cylinder gas audit (CGA) for NO_x (ppm) and CO (ppm):

	NO _x ((ppm)	CO (ppm)		
	Audit #1	Audit #2	Audit #1	Audit #2	
1. Date of audit	1/12/2021	1/12/2021	1/12/2021	1/12/2021	
2. Cylinder ID number	XC030834B	CC222300	XC030834B	CC222300	
Vendor	Airgas	Airgas	Airgas	Airgas	
3. Date of certification	2/14/2017	2/14/2017	2/14/2017	2/14/2017	
Expiration date	2/14/2025	2/14/2025	2/14/2025	2/14/2025	
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class	
5. Certified audit value	80.86	187.80	249.50	551.00	
6. CEMS response values	74.30	174.08	247.32	543.55	
	76.05	176.33	247.87	544.16	
	76.78	176.03	248.09	544.20	
Average	75.71	175.48	247.76	543.97	
7. Accuracy	-6.37%	-6.56%	-0.70%	-1.28%	

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – FCC Regen Line SO₂/NO_x/CO/O₂/CO₂ CEM

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P007

SO ₂ CEMS Manufacture ABB	SO ₂ CEMS Manufacturer: ABB		Model #: Limas 11 UV		MS Serial # 3.240685.3	
NO _x CEMS Manufacturer: ABB		Model #: Limas 11 UV		CEMS Serial # 3.240682.3		
CO CEMS Manufacturer: ABB					MS Serial # 3.240684.3	
O ₂ CEMS Manufacturer:	O ₂ CEMS Manufacturer:		del #:	CE	MS Serial #	
ABB	ABB		Magnos 206		01400101195301	
CO ₂ CEMS Manufacture ABB	er:	Model #: Limas 11 UV		CEMS Serial # 3.240682.3		
CEMS sampling location	: FCC Regen Line s	tack				
CEMS span values as p	er the applicable regu	ulatic	on:			
SO ₂	500 PPM	O ₂			25.0 %	
NOx	200 PPM		со		1000 PPM	
CO ₂	50.0 %					

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA): (Not applicable this quarter)
 - B. Cylinder gas audit (CGA) for O₂ (%) and SO₂ (ppm):

	O ₂ (pe	ercent)	SO ₂ (ppm)
	Audit #1	Audit #2	Audit #1	Audit #2
1. Date of audit	1/14/2021	1/14/2021	1/14/2021	1/14/2021
2. Cylinder ID number	XL001104B	BLM004046	CC443275	CC82139
Vendor	Airgas	Scott	Airgas	Airgas
3. Date of certification	11/20/2017	11/19/2015	11/21/2017	11/21/2017
Expiration date	11/20/2025	11/20/2023	11/21/2025	11/21/2025
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class
5. Certified audit value	5.49	13.90	130.70	267.60
6. CEMS response values	5.48	14.04	126.23	266.87
	5.49	14.05	131.03	269.49
	5.49	14.05	132.33	270.19
Average	5.49	14.05	129.86	268.85
7. Accuracy	0.00%	1.08%	-0.64%	0.47%

B. Cylinder gas audit (CGA) for NO_x (ppm) and CO (ppm):

	NO _x ((ppm)	CO (ppm)		
	Audit #1	Audit #2	Audit #1	Audit #2	
1. Date of audit	1/14/2021	1/14/2021	1/14/2021	1/14/2021	
2. Cylinder ID number	LL34302	BAL3120	XL002639B	BAL3034	
Vendor	Airgas	Air Liquide	Airgas	Scott	
	11/21/2017	8/12/2014	11/6/2017	11/12/2013	
Date of certification					
Expiration date	11/21/2025	8/13/2022	11/6/2025	11/13/2021	
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class	
Certified audit value	54.90	116.00	277.60	543.00	
6. CEMS response values	57.47	116.18	281.85	547.40	
	56.88	116.01	282.00	547.52	
	56.46	116.99	282.30	547.71	
Average	56.94	116.39	282.05	547.54	
7. Accuracy	3.72%	0.34%	1.60%	0.84%	

B. Cylinder gas audit (CGA) for CO₂ (ppm):

	CO ₂ (ppm)		
	Audit #1	Audit #2	
1. Date of audit	1/14/2021	1/14/2021	
2. Cylinder ID number	ALM063125	CC472694	
Vendor	Scott	Scott	
Date of certification	9/24/2018	9/24/2018	
Expiration date	9/24/2026	9/24/2026	
4. Type of certification	RATA Class	RATA Class	
5. Certified audit value	13.11	27.20	
6. CEMS response values	13.59	27.39	
	13.65	27.41	
	13.66	27.42	
Average	13.63	27.41	
7. Accuracy	3.97%	0.77%	

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
- 2. Corrective action taken:
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report – Sulfur Recovery Unit (SRU #1) SO₂/O₂ CEM

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P009

SO ₂ CEMS Manufactur Ametek	er:	Model #: 919	9	CEMS S	erial #: ZB-919SP-10541-1
O ₂ CEMS Manufacture Ametek	r:	Model #: 919	9	CEMS S	erial #: ZB-919SP-10541-1
CEMS sampling location	n: SRU Therm	al Oxidizer			
CEMS span values as per the applicable regulation:					
	PPM	1			<u>Percent</u>
SO ₂	500	l	O ₂		10.0
NO _x			СО	2	

- I. Accuracy assessment results (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for O₂ (%) and SO₂ (ppm):

	O ₂ percent		SO ₂	maa
	Audit #1 Audit #2		Audit #1	Audit #2
1. Date of audit	2/8/2021	2/8/2021	2/8/2021	2/8/2021
2. Cylinder ID number	ALM028323	CC13867	XC006260B	ALM004131
Vendor	Airgas	Airgas	Airgas	Airgas
3. Date of certification	2/6/2017	11/20/2017	2/24/2017	2/14/2017
Expiration date	2/6/2025	11/20/2025	2/24/2025	2/14/2025
4. Type of certification	RATA Class	RATA Class	RATA Class	EPA Protocol
5. Certified audit value	2.52	5.98	124.00	268.70
6. CEMS response values	2.53	6.00	125.70	270.82
	2.54	5.99	128.30	271.43
	2.54	6.00	128.45	272.80
Average	2.54	6.00	127.48	271.68
7. Accuracy	0.79%	0.33%	2.81%	1.11%

- **C. Relative accuracy audit (RAA) for:** (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates:
 - b. Number of days:

 - Corrective action taken:
 Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – Sulfur Recovery Unit #2 and #3 (TRP SRU) SO₂/O₂ CEM

Period ending date: March 31 Year: 2021

Company name: BP-Husky Refining LLC **Plant name:** Toledo Refinery

Source unit #: P037

SO ₂ CEMS Manufactu Ametek				CEMS Serial #: ZX-919-1	
O ₂ CEMS Manufacture Ametek	O ₂ CEMS Manufacturer: Model #: Ametek 919			CEMS Serial #: ZX-919-10814-1	
CEMS sampling location: TGT #2 Thermal Oxidizer stack					
CEMS span values as per the applicable regulation:					
	PPM Percent				<u>Percent</u>
SO ₂	500			O ₂	10.0
NO _x				CO ₂	

- I. Accuracy assessment results (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for O₂ (%) and SO₂ (ppm):

	O ₂ pe	ercent	SO ₂	ppm
	Audit #1	Audit #2	Audit #1	Audit #2
1. Date of audit	2/8/2021	2/8/2021	2/8/2021	2/8/2021
2. Cylinder ID number	ALM028323	CC13867	XC006260B	ALM004131
Vendor	Airgas	Airgas	Airgas	Airgas
3. Date of certification	2/6/2017	11/20/2017	2/24/2017	2/14/2017
Expiration date	2/6/2025	11/20/2025	2/24/2025	2/14/2025
4. Type of certification	RATA Class	RATA Class	RATA Class	EPA Protocol
5. Certified audit value	2.52	5.98	124.00	268.70
6. CEMS response values	2.49	5.97	135.92	288.67
	2.49	5.97	139.43	280.74
	2.49	5.97	144.78	306.22
Average	2.49	5.97	140.04	291.88
7. Accuracy	-1.19%	-0.17%	12.94%	8.63%

- **C. Relative accuracy audit (RAA) for:** (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates:
 - b. Number of days:2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Table B1 - Calibration Drift Assessment; Out-of-Control Periods for Part 60

CEMS	Start Time	End Time	Hours	Corrective Action Taken
FCC Regen SO2	2/10/2021 10:00	2/11/2021 13:00	27	Recalibrated and returned the analyzer to service.
FCC Regen Nox	2/11/2021 7:00	2/11/2021 13:00	6	Recalibrated and returned the analyzer to service.
FCC Regen CO	2/12/2021 7:00	2/13/2021 9:00	26	Recalibrated and returned the analyzer to service.
FCC Regen CO2	2/12/2021 7:00	2/13/2021 9:00	26	Recalibrated and returned the analyzer to service.
FCC Regen Nox	2/12/2021 7:00	2/13/2021 9:00	26	Recalibrated and returned the analyzer to service.
FCC Regen SO2	2/12/2021 7:00	2/13/2021 9:00	26	Recalibrated and returned the analyzer to service.
FCC Regen O2	2/12/2021 7:00	2/13/2021 9:00	26	Recalibrated and returned the analyzer to service.
East Flare H2S	2/9/2021 7:00	2/10/2021 10:00	27	Cleared line, recalibrated the analyzer and returned to service.
East Side Mix Drum H2S	2/15/2021 8:00	2/16/2021 9:00	25	Recalibrated and returned the analyzer to service.
FCC Regen CO	3/11/2021 7:00	3/12/2021 14:00	31	Recalibrated and returned the analyzer to service.
FCC Regen CO2	3/11/2021 7:00	3/12/2021 14:00	31	Recalibrated and returned the analyzer to service.
FCC Regen Nox	3/11/2021 7:00	3/12/2021 14:00	31	Recalibrated and returned the analyzer to service.
FCC Regen SO2	3/11/2021 7:00	3/12/2021 14:00	31	Recalibrated and returned the analyzer to service.
FCC Regen O2	3/11/2021 7:00	3/12/2021 14:00	31	Recalibrated and returned the analyzer to service.
SRU 1 SO2	3/30/2021 7:00	3/31/2021 10:00	27	Recalibrated and returned the analyzer to service.
TIU Mix Drum TS	2/8/2021 8:00	2/9/2021 9:00	25	Recalibrated and returned the analyzer to service.
WF TS	3/2/2021 8:00	3/3/2021 10:00	26	Replaced pyrolizer and oven assembly, recalibrated and returned the analyzer to service.

Table B2 – Calibration Drift Assessment; Out-of-Control Periods for Part 63

CEMS	Start Time	End Time	Hours	Corrective Action Taken
FCC Regen CO	2/13/2021 7:00	2/13/2021 9:00	2	Recalibrated and returned analyzer to service.
FCC Regen CO2	2/13/2021 7:00	2/13/2021 9:00	2	Recalibrated and returned analyzer to service.
SRU 1 SO2	2/14/2021 7:00	2/14/2021 8:00	1	Recalibrated and returned analyzer to service.
FCC Regen CO	3/12/2021 7:00	3/12/2021 14:00	7	Recalibrated and returned analyzer to service.
FCC Regen CO2	3/12/2021 7:00	3/12/2021 14:00	7	Recalibrated and returned analyzer to service.
SRU 1 SO2	3/3/2021 7:00	3/3/2021 11:00	4	Recalibrated and returned analyzer to service.
SRU 1 SO2	3/26/2021 7:00	3/26/2021 9:00	2	Recalibrated and returned analyzer to service.
SRU 1 SO2	3/31/2021 7:00	3/31/2021 10:00	3	Recalibrated and returned analyzer to service.
#2 & #3 Sulfur Recovery Units / TRP SRU SO2	3/10/2021 7:00	3/10/2021 8:00	1	Recalibrated and returned analyzer to service.
#2 & #3 Sulfur Recovery Units / TRP SRU SO2	3/13/2021 7:00	3/13/2021 8:00	1	Recalibrated and returned analyzer to service.
#2 & #3 Sulfur Recovery Units / TRP SRU SO2	3/17/2021 7:00	3/17/2021 8:00	1	Recalibrated and returned analyzer to service.
#2 & #3 Sulfur Recovery Units / TRP SRU SO2	3/20/2021 7:00	3/20/2021 8:00	1	Recalibrated and returned analyzer to service.
#2 & #3 Sulfur Recovery Units / TRP SRU SO2	3/21/2021 7:00	3/21/2021 8:00	1	Recalibrated and returned analyzer to service.
#2 & #3 Sulfur Recovery Units / TRP SRU SO2	3/23/2021 7:00	3/23/2021 8:00	1	Recalibrated and returned analyzer to service.

Per 40 CFR Part 63.8(c)(7)(i), a CMS is out of control if the zero, mid-level, or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard. These instances are reported in Table B2 above.

bp



29-Jul-2021

City of Toledo
Division of Environmental Services
348 S. Erie Street
Toledo, OH 43604
Attn.: Peter Park

Des Gillen President BP-Husky Refining LLC 4001 Cedar Point Road Oregon, OH 43616 P 567.698.4529 des.gillen@se1.bp.com

RE: CMS Summary & Data Assessment Report – 2nd Quarter 2021

Dear Sir or Madam:

Attached is the revised CMS Summary Report and Data Assessment Report for BP-Husky Refining LLC for the period of April 1, 2021 through June 30, 2021.

CMS Summary Report (Attachment A)

A complete list of emissions units and pollutants monitored are in Table 1; Summary Reports are included in Attachment A. Excess Emissions and Monitoring Systems Performance Report is not required under 40 CFR 60.7(d) if the total duration of excess emissions is less than 1% and the CMS downtime is less than 5% of the total operating time for the quarter. Unless where noted in Table 1, these criteria were met for the units listed. All future reports will have downtime and excess emissions for gases reported in hours as described in 40 CFR 60.7(d).

Table 1. Emission Units and Pollutants Monitored

Location/Emission Unit	Parameter	Quarter 2 2021 Downtime (% unit operating time)	Notes
TIU Fuel Gas Mix Drum			
- B015 - Crude 1 Furnace		0.00	
- B017 - Coker 2 Furnace		0.00	
- B019 - Crude Vac 2 Furnace		0.00	
- B022 - Naphtha Treater Furnace	7	0.00	
- B029 - DHT A-Train Furnace	╗	0.00	
- B030 - BGOT Furnace	H₂S in Fuel Gas	0.00	
- B031 - Vac 1 Furnace	Gas	0.00	
- B032 - Coker 3 Furnace		0.00	
- B033 - East B-GOT Furnace		0.00	
- B034 – East Alstom Boiler	\neg	0.00	
- B035 – West Alstom Boiler	\neg	0.00	
- P007 - FCC/CO Boiler	7	0.00	

Location/Emission Unit	Parameter	Quarter 2 2021 Downtime (% unit operating time)	
TIU Fuel Gas Mix Drum			
- B015 - Crude 1 Furnace		4.40	
- B019 - Crude Vac 2 Furnace		4.40	
- B022 - Naphtha Treater Furnace		4.40	
- B029 - DHT A-Train Furnace	Total Sulfur in	4.40	
- B030 - BGOT Furnace	Fuel Gas	4.40	
- B031 - Vac 1 Furnace]	4.40	
- B032 - Coker 3 Furnace]	5.83	Downtime > 5%
- B033 - East B-GOT Furnace	_	4.40	
- B034/B035 – East & West Alstom Boilers		4.40	
East Side Fuel Gas Mix Drum]		
- B008 - Iso 2 Feed Heater	H₂S in Fuel	0.00	
- B009 - Iso 2 Stabilizer Reboiler	Gas	0.00	
- B010 - Iso 2 Splitter Reboiler		0.00	
B036 - Reformer 3 Furnace	H₂S	0.00	
P003 - East Flare (see note A)	H₂S	0.05	
P003 - East Flare	Total Sulfur	1.47	
P004 – West Flare Vent Gas (see note A)	H ₂ S	1.56	
P004 – West Flare "C-Valve" Vent Gas	H ₂ S	0.00	
P004 – West Flare Vent Gas	Total Sulfur	1.51	
P004 – West Flare "C-Valve" Vent Gas	Total Sulfur	4.40	
B036 – Reformer 3 Furnace	NOx	0.00	
P007 – FCCU/CO Boiler Bypass (see note B)	CO	0.00	
P007 – FCCU/CO Boiler Bypass (see note B)	NOx	0.00	
P007 – FCCU/CO Boiler Bypass (see note B)	SO ₂	0.00	
P007 – CO Boiler Exhaust	СО	1.01	
P007 – CO Boiler Exhaust	NOx	1.01	
P007 – CO Boiler Exhaust	SO ₂	1.01	
P009 - Sulfur Recovery Unit with #1	SO ₂	0.48	
P037 - Sulfur Recovery Units #2 & #3	SO ₂	0.46	
B034 – East Alstom Boiler (see note C)	NOx	0.13	
B035 – West Alstom Boiler (see note C)	NOx	0.09	

Note A: P003/P004 East & West Flare

The attached H_2S tables identify all emissions in excess of the Subpart Ja H_2S limit of 162 ppm $_V$ on a 3-hour rolling average. If an event did not occur for 3 consecutive hours, then it does not meet the 3-hour averaging requirement and therefore is not considered excess emissions. If a 3-hour event exceeds the 100,000 ppm $_V$ span limit of the H_2S CMS, then the Total Sulfur analyzer data was used for the H_2S value.

Note B: P007 - FCCU/CO Boiler Bypass

The purpose of these CEMS are to continuously monitor the listed (CO, NOx, & SO₂) emissions from the FCCU Regenerator exhaust in the event of a CO Boiler bypass while there is feed to the FCCU. Otherwise, compliance with the listed limits for the FCCU is determined from continuous emissions monitoring of the CO Boiler Exhaust stack. Although this source is not subject to 40 CFR Part 60, Section C.12.(d)(7) of P0104782 (as set forth by Permits-to-Install 04-01290 and P0105902) requires monitoring per 40 CFR Part 60.11. As

noted in Section C.12.(e)(4) of P0104782, the refinery has opted to follow the reporting requirements under 40 CFR 60.7. 40 CFR 60.7(c) requires the submission of an Excess Emissions and Monitoring Systems Performance Report and Summary Report Form.

Note C: B034/B035 East & West Alstom Boiler
The attached data tables include supplemental reporting for NOx CEMS records required by 40CFR49b(i).

During the 2nd quarter the TIU Mix Drum Total Sulfur CEMS was down for 96 hours due to a drift test failing on the analyzer. The Coker 3 Furnace was offline during the TRP Amine Treater outage and then had an additional unplanned outage due to a mechanical issue upon startup which kept the furnace offline until April 23, 20201; these outages resulted in reduced operating time for the quarter. As the furnace uses the fuel gas from the TIU Mix Drum, the 96 hours along with the reduced operating time of the heater resulted in greater than 5% downtime only for the Coker 3 Furnace.

Details of all downtime or excess emission incidents are provided in the summary tables in Attachment A.

Data Assessment Report (Attachment B)

In accordance with the terms and conditions of their permits, Attachment B includes the Continuous Emission Monitor (CEM) Data Assessment Report (DAR) for this quarter. Table 2 below is a summary of Cylinder Gas Audits conducted this quarter. Where noted in Table 2, Relative Accuracy Test Audits (RATAs) were conducted this quarter; these reports were submitted previously via Air Services.

Table 2. Cylinder Gas Audit Summary

Location/Emission Unit	Parameter	Notes
East Side Fuel Gas Mix Drum (B008, B009, B010)	H2S	
TIU Fuel Gas Mix Drum (B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035, P007)	H ₂ S	
B036 - Reformer 3 Heater H2S CMS	H ₂ S	
P003 - East Flare	H₂S	
P004 - West Flare	H ₂ S	
P003 - East Flare (low & high ranges)	Total Sulfur	
P004 - West Flare (low & high ranges)	Total Sulfur	
TIU Fuel Gas Mix Drum (B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035, P007)	Total Sulfur	
B036 - Reformer 3 NOx/O2 CEMS	NOx, O ₂	RATA
B034 - East Alstom Boiler	NOx, O ₂	RATA
B035 - West Alstom Boiler	NOx, O ₂	RATA
P007 - FCCU/CO Boiler	SO ₂ , NOx, CO, O ₂	RATA
P007 - FCC Regen Line	SO ₂ , NOx, CO, CO ₂ , O ₂	RATA
P009 - SRU #1	SO ₂ , O ₂	RATA
P037 - SRU #2 & #3 (TRP SRU)	SO_2, O_2	RATA

The DAR also includes out-of-control (OOC) times for the FCCU/CO Boiler CO CEMS, FCC Regen Line CO, O₂, & CO₂ CEMS, the SRU#1 SO₂ & O₂ CEMS, and the TRP SRU SO₂ & O₂ CEMS based on the OOC requirements defined by the MACT general requirements, 40 CFR Part 63.8(c)(7).

If you have any questions concerning this report, please contact Ashley Zapp (ashley.zapp@bp.com or 567-698-4410), or Cameron Loth (cameron.loth@bp.com or 567-698-4833).

Based on information and belief formed after reasonable inquiry, the statements and information in this report are true, accurate, and complete.

Sincerely,

Des Gillen
90F20640AD13450...

Des Gillen President - BP-Husky Refining LLC

Attachment A – CMS Summary Report Attachment B – Data Assessment Report

Attachment A – CMS Summary Report

Pollutant: H₂S

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: Crude 1 Furnace (0448020007B015)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.14	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³ 2 Record all times in hours.	0.14	operating time] % ³	0.00

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pol	lutant:	H ₂ S
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: Coker 2 Furnace (0448020007B017)

Total Source Operating Time in Reporting Period²: 1,935 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0.16	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.00
2 Record all times in hours.			
		r greater of the total operating time or the total CMS downtime is eport form and the excess emission report shall be submitted.	5 percent of

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen	DocuSigned by:
Signature:		Des Gillen
Title:	President - B	P-Husky Refining LLC
Date:	29-Jul-2021	

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: <u>BP-Husky Refining LLC</u>

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: <u>Crude Vac 2 Furnace (0448020007B019)</u>

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.14	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.14	operating time] % ³	0.00
2 Record all times in hours.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Peskillend by:
Signature:	Des Gillen
	90F20640AD13450
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H2S

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: Naphtha Treater Furnace (0448020007B022)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.14	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.14	operating time] % ³	0.00
2 Record all times in hours.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

DocuSigned by:

Des Gillen

Des Gillen

President - BP-Husky Refining LLC

Date: 29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant:	H_2S
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: DHT A-Train Furnace (0448020007B029)

Total Source Operating Time in Reporting Period²: 2,184 hr (TIU fuel gas was combusted for 1,869 hours and

natural gas was combusted for 315 hours for a total of

2,184 hours this quarter)

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.14	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.14	operating time] % ³	0.00
2 Record all times in hours.			
		r greater of the total operating time or the total CMS downtime is report form and the excess emission report shall be submitted.	5 percent of

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen Docusigned by:
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant:	H_2S
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: BGOT Furnace (0448020007B030)

Total Source Operating Time in Reporting Period²: 2,184 hr (TIU fuel gas was combusted for 1,869 hours and

natural gas was combusted for 315 hours for a total of

2,184 hours this quarter)

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.14	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.14	operating time] % ³	0.00
2 Record all times in hours.		<u> </u>	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last guarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
Signature:	Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant:	H ₂ S
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: <u>Vac 1 Furnace (0448020007B031)</u>

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0.14	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.00
² Record all times in hours. ³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.			

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: Coker 3 Furnace (0448020007B032)

Total Source Operating Time in Reporting Period²: 1,645 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.18	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.10	operating time] % ³	0.00
2 Record all times in hours.			
³ For the condition period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

Docusigned by:

Des Gillen

Possignature:

Des Gillen

Possignature:

Des Gillen

Possignature:

Des Gillen

President - BP-Husky Refining LLC

Date:

29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: April 1, 2021 To: June 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: East BGOT Furnace (0448020007B033)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CMS Perfomance Summary	
	CMS downtime in reporting period due to:		
0	a. Monitor equipment malfunctions	0	
0	b. Non-monitor equipment malfunctions	0	
3	c. Quality assurance calibration	0	
0	d. Other known causes	0	
0	e. Unknown causes	0	
3	2. Total CMS Downtime	0	
0.14	3. [Total CMS Downtime] x (100) / [Total source	0.00	
0.14	operating time] % ³	0.00	
	3 0	1. CMS downtime in reporting period due to: 0 a. Monitor equipment malfunctions 0 b. Non-monitor equipment malfunctions 3 c. Quality assurance calibration 0 d. Other known causes 0 e. Unknown causes 3 2. Total CMS Downtime 0.14 3. [Total CMS Downtime] x (100) / [Total source	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Des Gillen —pocusigned by:
Des Gillen
President - BP-Husky Refining LLC
29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

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	ıuta		1120

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: East Alstom Boiler (0448020007B034)

Source Operating Time in Reporting Period²:

1,482 hr (TIU fuel gas was combusted for 43 hours and natural gas was combusted for 1,439 hours for a total of

1,482 hours this quarter)

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assus	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /		3. [Total CMS Downtime] x (100) / [Total source	
[Total source operating time] % ³	0.00	operating time] % ³	0.00
2 Record all times in hours.	·	1	
³ For the reporting period: If the total duration of excess emissions i	s 1 percent o	r greater of the total operating time or the total CMS downtime is	5 percent of

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable- no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

DocuSigned by:

Des Gillen

Poption Gillen

90F20640AD13450...

Title:

President - BP-Husky Refining LLC

Date:

29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: ⊢	I_2S
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: **BP-Husky Refining LLC**

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Total Source Operating Time in Reporting Period²:

West Alstom Boiler (0448020007B035) **Process Unit(s) Description:**

2.184 hr (TIU fuel gas was combusted for 1,850 hours and natural gas was combusted for 334 hours for a total of

2,184 hours this quarter)

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /		3. [Total CMS Downtime] x (100) / [Total source	
[Total source operating time] % ³	0.14	operating time] % ³	
2 Record all times in hours.			I
		r greater of the total operating time or the total CMS downtime is report form and the excess emission report shall be submitted.	5 percent of

Describe any changes since last quarter in CMS, process, or controls.

The West Alstom Boiler combusted a combination of natural gas and TIU Mix Drum fuel gas this quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen Des Gillen Signature: 90F20640AD13450... Title: President - BP-Husky Refining LLC 29-Jul-2021 Date:

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: FCC/CO Boiler (0448020007P007)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	3	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	3	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0.14 3. [Total CMS Downtime] x (100) / [Total source operating time] % ³		0.00
2 Record all times in hours.			
		r greater of the total operating time or the total CMS downtime is report form and the excess emission report shall be submitted.	5 percent of

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Des Gillen
DocuSigned by:
Des Gillen
90F20640AD13450
President - BP-Husky Refining LLC
29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

		A B	BP-HUSKY REFININ	EFINING) LLC -1	TIU MIX DRUI	G LLC - TIU MIX DRUM H2S CMS REPORT FOR 2ND QUARTER 2021	PORT FOR 2ND	QUARTER 2021			
	Reporting Requirement (choose one or both)	(choose one or both)	ACTUAL		DEVIATION INFORMATION	NOL			WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION WRITTEN	
EMISSIONS UNIT ID/Description			METHOD USED	DEVIATION DURATION	DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR CORRECTIVE ACTIONS / PREVENTATIVE	CORRECTIVE ACTIONS / PREVENTATIVE	ATTRIBUTABLE TO A MALFUNCTION? (Yes or No -	ATTRIBUTABLE TO A ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - (If no reports were made, state) (If no reports were made, state)	REPORT DATE (If no reports were made, state	
	Quarterly	Quarterly Semi-Annual			Date / Time End	MAGNITUDE OF THE DEVIATION		MEASURES TAKEN	If Yes, continue to the next column)	"NO REPORTS" in the space "NO REPORTS" in the space below)	"NO REPORTS" in the space below)	
B015 - Crude 1 Furnace; B019 - Crude 2 Furnace; B022 - Naphtha Treater Furnace; B023 - DHT A - Train Furnace; B030 - DHT B - Train Furnace; B031 - Vac 1 Furnace; B033 - East BGOT Furnace; B033 - East BGOT Furnace; B034 - East Alstom Boller; B035 - West Alstom Boller; B035 - West Alstom Boller;	Yes	ž	Continuous Montoring System	5/4/21 11:00	5/4/21 14:00	CEMS excess emissions for 3 hours.	An upset in the coker gas plant resulted in amine carryover into the sweet knockout drum and TIU fuel gas mix drum	Coker rates were reduced to help reduce gas flow which reduced the flooding in the bulk amine contactor.	9 Z	V.A	Y/N	

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Pollutant:	Total Sulfur
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 34.53 tons SO2 per rolling 12-month period

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 6/18/2021

Process Unit(s) Description: Crude 1 Furnace (0448020007B015)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CMS Perfomance Summary		
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	96	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	0	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emissions	0	2. Total CMS Downtime	96	
3. Total duration of excess emissions x (100) /		3. [Total CMS Downtime] x (100) / [Total source	4.40	
[Total source operating time] %3		operating time] % ³	4.40	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Docusigned by:

Signature: Des Gillen

90F20640AD13450...

Title: President - BP-Husky Refining LLC

Date: 29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation:21.02 tons SO2 per rolling 12-month periodAddress:4001 Cedar Point Road, Oregon, Ohio 43616Monitor Manufacturer and Model No.:Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 6/18/2021

Process Unit(s) Description: Crude Vac 2 Furnace (0448020007B019)

Total Source Operating Time in Reporting Period²: 2,184 hr

	CMS Perfomance Summary	
	CMS downtime in reporting period due to:	
0	a. Monitor equipment malfunctions	0
0	b. Non-monitor equipment malfunctions	96
0	c. Quality assurance calibration	0
0	d. Other known causes	0
0	e. Unknown causes	0
0	2. Total CMS Downtime	96
0	3. [Total CMS Downtime] x (100) / [Total source	4.40
	operating time] % ³	4.40
	0 0 0	1. CMS downtime in reporting period due to: 0 a. Monitor equipment malfunctions 0 b. Non-monitor equipment malfunctions 0 c. Quality assurance calibration 0 d. Other known causes 0 e. Unknown causes 0 2. Total CMS Downtime 3. [Total CMS Downtime] x (100) / [Total source

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen — DocuSigned by:
Signature:	Des Gillen
	90F20640AD13450
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 6.45 tons SO2 per rolling 12-month period

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 6/18/2021

Process Unit(s) Description: Naphtha Treater Furnace (0448020007B022)

Total Source Operating Time in Reporting Period²: 2,184 hr

	CMS Perfomance Summary	
	CMS downtime in reporting period due to:	
0	a. Monitor equipment malfunctions	0
0	b. Non-monitor equipment malfunctions	96
0	c. Quality assurance calibration	0
0	d. Other known causes	0
0	e. Unknown causes	0
0	2. Total CMS Downtime	96
0	3. [Total CMS Downtime] x (100) / [Total source	4.40
0	operating time] % ³	4.40
	0	1. CMS downtime in reporting period due to: 0 a. Monitor equipment malfunctions 0 b. Non-monitor equipment malfunctions 0 c. Quality assurance calibration 0 d. Other known causes 0 e. Unknown causes 0 2. Total CMS Downtime 3. [Total CMS Downtime] x (100) / [Total source

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Docusigned by:

Signature: Des Gillen

90F20640AD13450...

Title: President - BP-Husky Refining LLC

Date: 29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur				
Reporting Period Dates:	From:	April 1, 2021	To:	July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation:2.32 tons SO2 per rolling 12-month periodAddress:4001 Cedar Point Road, Oregon, Ohio 43616Monitor Manufacturer and Model No.:Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 6/18/2021

Process Unit(s) Description: DHT A-Train Furnace (0448020007B029)

Total Source Operating Time in Reporting Period²:

2,184 hr (TIU fuel gas was combusted for 1,869 hours and natural gas was combusted for 315 hours for a total of

2,184 hours this quarter)

		_,	
Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	96
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	96
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	4.40
[Total source operating time] % ³		operating time] % ³	4.40
2 Record all times in hours.	•		
³ For the reporting period: If the total duration of excess emissions	is 1 percent or	r greater of the total operating time or the total CMS downtime is 5	percent of

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

Docusigned by:

Des Gillen

President - BP-Husky Refining LLC

Date:

Des Gillen

29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur				
Reporting Period Dates:	From:	April 1, 2021	To:	July 1, 2021

Company: BP-Husky Refining LLC

 Emission Limitation:
 3.86 tons SO2 per rolling 12-month period

 Address:
 4001 Cedar Point Road, Oregon, Ohio 43616

 Monitor Manufacturer and Model No.:
 Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 6/18/2021

Process Unit(s) Description: BGOT Furnace (0448020007B030)

Total Source Operating Time in Reporting Period²: 2,184 hr (TIU fuel gas was combusted for 1,869 hours and

natural gas was combusted for 315 hours for a total of

2,184 hours this quarter)

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	96
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	96
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	4.40
[Total source operating time] % ³		operating time] % ³	4.40
2 Record all times in hours.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

DocuSigned by:

Des Gillen

Procident PR Husky Pofining LLC

Title: President - BP-Husky Refining LLC

Date: 29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation:11.62 tons SO2 per rolling 12-month periodAddress:4001 Cedar Point Road, Oregon, Ohio 43616Monitor Manufacturer and Model No.:Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 6/18/2021

Process Unit(s) Description: <u>Vac 1 Furnace (0448020007B031)</u>

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		
	1. CMS downtime in reporting period due to:	
0	a. Monitor equipment malfunctions	0
0	b. Non-monitor equipment malfunctions	96
0	c. Quality assurance calibration	0
0	d. Other known causes	0
0	e. Unknown causes	0
0	2. Total CMS Downtime	96
0	3. [Total CMS Downtime] x (100) / [Total source	4.40
	operating time] % ³	4.40
	0	0 a. Monitor equipment malfunctions 0 b. Non-monitor equipment malfunctions 0 c. Quality assurance calibration 0 d. Other known causes 0 e. Unknown causes 0 2. Total CMS Downtime 3. [Total CMS Downtime] x (100) / [Total source

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

Docusigned by:

Des Gillen

90F20640AD13450...

Title:

President - BP-Husky Refining LLC

29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

 Emission Limitation:
 20.46 tons SO2 per rolling 12-month period

 Address:
 4001 Cedar Point Road, Oregon, Ohio 43616

 Monitor Manufacturer and Model No.:
 Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 6/18/2021

Process Unit(s) Description: Coker 3 Furnace (0448020007B032)

Total Source Operating Time in Reporting Period²: 1,645 hr

	CMS Perfomance Summary	
	CMS downtime in reporting period due to:	
0	a. Monitor equipment malfunctions	0
0	b. Non-monitor equipment malfunctions	96
0	c. Quality assurance calibration	0
0	d. Other known causes	0
0	e. Unknown causes	0
0	2. Total CMS Downtime	96
3. [Total CMS Downtime] x (100) / [Total sou		5,83
0	operating time] % ³	5.65
	0 0 0	1. CMS downtime in reporting period due to: 0 a. Monitor equipment malfunctions 0 b. Non-monitor equipment malfunctions 0 c. Quality assurance calibration 0 d. Other known causes 0 e. Unknown causes 0 2. Total CMS Downtime 3. [Total CMS Downtime] x (100) / [Total source

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

DocuSigned by:

90F20640AD13450...

Des Gillen

Signature:

Title: President - BP-Husky Refining LLC

Date: 29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Excess Emission and Monitoring System Performance Report Coker 3 Furnace CEMS Report (Source # B032) 2Q 2021

In accordance with the applicable PTIs for this source, written reports of excess emissions shall include the following information:

1. The magnitude of excess emissions computed in accordance with §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

There were no periods of excess emissions for this CEMS.

2. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

There were no periods of excess emissions for this CEMS.

3. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

The Coker 3 Furnace operated for a total of 1,645 hours in 2Q. There were two periods of downtime for the quarter while the source was in operation listed below:

Start time: 5/6/2021 7:00
 End time: 5/8/2021 7:00
 Duration: 48 hours

• Start time: 5/9/2021 7:00 End time: 5/11/2021 7:00

Duration: 48 hours

During these two periods of downtime, Vivicom did not run the daily drift test. These results were reported as incomplete in the system. Once the issue was identified, the analyzer was recalibrated and returned to service. To identify the issue more quickly in the future, the Refinery contacted Vivicom to add a flag to identify an incomplete validation on the face plate screen.

Pollutant: Total Sulfu	٢
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation:3.86 tons SO2 per rolling 12-month periodAddress:4001 Cedar Point Road, Oregon, Ohio 43616Monitor Manufacturer and Model No.:Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 6/18/2021

Process Unit(s) Description: East BGOT Furnace (0448020007B033)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	96
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	96
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	4.40
[Total source operating time] %3		operating time] % ³	7.40
2 Record all times in hours.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

Reporting Period Dates:	From: 1	April 1, 202	<u>1</u> To: <u>July 1, 2021</u>	
Company:	BP-Husk	y Refining L	<u>LC</u>	
Emission Limitation:	3.86 tons	SO2 per ro	lling 12-month period	
Address:	4001 Ced	dar Point Ro	oad, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	Thermo S	Scientific SC	DLA II, SN: SL-09030713	
Date of Latest CMS Certification or Audit:	6/18/202	1		
Process Unit(s) Description:	East Alst	om Boiler (0	0448020007B034) and West Alstom Boiler (04480200	07B035)
Source Operating Time in Reporting Period ² :		2,184	(TIU fuel gas was combusted for 1,893 ho least one of the Alstom Boilers for the qua gas was combusted for 291 hours in both Boilers for the quarter.)	rter. Natural
Emission Data Summary			CMS Perfomance Summary	
1. Duration of excess emissions in reporting period of	due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	96
c. Process Problems		0	c. Quality assu s	0
d. Other known causes		0	d. Other known causes	0
e. Unknown causes		0	e. Unknown causes	0
2. Total duration of excess emissions		0	2. Total CMS Downtime	96
3. Total duration of excess emissions x (100) / [Total source operating time] % ³		0	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	4.40
2 Record all times in hours.				
i or the reporting period.			reater of the total operating time or the total CMS downtime is 5 out form and the excess emission report shall be submitted.	percent of
Describe any changes since last quarter in CMS, The East Alstom Boiler combusted a combination of the combusted and combination of the combination of th	natural gas	s and TIU M		
I certify that the information contained in this repo	ort is true,	, accurate, a	and complete.	
Name: Des Gillen Docusigned by:			_	
Signature: Des Gillen			_	
90F20640AD13450 Title: President - BP-Husky Refining LLC			_	

Date:

29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

		BP.	BP-HUSKY REFINI	EFINING	: LLC - T	IU MIX DRU	NG LLC - TIU MIX DRUM TS CMS REPORT FOR 2ND QUARTER 2021	FOR 2ND QUARTE	R 2021		
	Reporting Requirement (choose one or both)		ACTUAL		DEVIATION INFORMATION	NO.		CORRECTIVE ACTIONS/	WAS DEVIATION ATTRIBILITABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE
EMISSIONS UNIT ID/Description	Quarterly	Quarterly Semi-Annual COMPLIANCE	METHOD USED TO DETERMINE COMPLIANCE	DEVIATION D Date / Time	ION DURATION ne Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE MEASURES TAKEN	MALEUNCTION? (Yes or No- If Yes, continue to the next column)	e, state space	(If no reports were made, state "NO REPORTS" in the space below)
B015 - Crude 1 Furnace; B022 - Naphtha Treater Furnace; B032 - DHT A - Train Furnace B030 - DHT B - Train Furnace; B031 - Vac 1 Furnace; B032 - East BOOT Furnace; B035 - West Alstom Bolers; P007 - FCC/ICO Boller	× es	è	Continuous Monitoring System	5/6/21 7:00	5/8/21 7:00	CEMS downtime for 48 hours.	Vivicom did not run the daily drift test. Reported as incomplete.	Contacted Vivicom to add a flag to identify an incomplete validation on the face plate screen. Recalibrated and returned analyzer to service.	<u>8</u>	NA	K N
B015 - Crude 1 Furnace; B022 - Naphtha Treater Furnace; B029 - DHT A - Train Furnace B030 - DHT B - Train Furnace; B031 - Vac 1 Furnace; B032 - East BOOT Furnace; B035 - East BOOT Furnace; B035 - West Alstom Bolers; P007 - FCC/CO Boller	× ×	°Z	Continuous Monitoring System	5/9/21 7:00	5/11/21 7:00	CEMS downtime for 48 hours.	Vivicom did not run the daily drift test. Reported as incomplete.	Contacted Vivicom to add a flag to identify an incomplete validation on the face plate screen. Recalibrated and returned analyzer to service.	No	N/A	ΝΆ

Pollutar	ıt:	H_2S
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Reporting Period Dates: From: <u>April 1, 2021</u> To: July 1, 2021

Company: **BP-Husky Refining LLC**

0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average **Emission Limitation:**

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30028039490020

Date of Latest CMS Certification or Audit: 6/14/2021

Process Unit(s) Description: <u>Iso 2 Feed Heater (0448020007B008)</u>

Total Source Operating Time in Reporting Period²: 2,153 hr

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due	e to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0.00	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.00
i or the reporting period.	•	cent or greater of the total operating time or the total CMS downtime th the summary report form and the excess emission report shall be	

submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
	90F20640AD13450
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutan	t: H ₂ S
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30028039490020

Date of Latest CMS Certification or Audit: 6/14/2021

Process Unit(s) Description: <u>Iso 2 Stabilizer Reboiler (0448020007B009)</u>

Total Source Operating Time in Reporting Period²: 2,142 hr

Emission Data Summary		CMS Perfomance Summary			
1. Duration of excess emissions in reporting period due	e to:	CMS downtime in reporting period due to:			
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0		
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0		
c. Process Problems	0	c. Quality assurance calibration	0		
d. Other known causes	0	d. Other known causes	0		
e. Unknown causes	0	e. Unknown causes	0		
2. Total duration of excess emissions	0	2. Total CMS Downtime	0		
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source			
[Total source operating time] % ³		operating time] % ³			
2 Record all times in hours,					
i or the reporting period.		ent or greater of the total operating time or the total CMS downtime th the summary report form and the excess emission report shall be			

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H ₂ S	3
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30028039490020

Date of Latest CMS Certification or Audit: 6/14/2021

Process Unit(s) Description: <u>Iso 2 Splitter Reboiler (0448020007B010)</u>

Total Source Operating Time in Reporting Period²: 2,109 hr

Emission Data Summary		CMS Perfomance Summary		
1. Duration of excess emissions in reporting period due	e to:	CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	0	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emissions	0	2. Total CMS Downtime		
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source		
[Total source operating time] %3	0.00	operating time] % ³		
2 Record all times in hours.	-			
To the reporting period:	•	ent or greater of the total operating time or the total CMS downtime n the summary report form and the excess emission report shall be		

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
Signature:	Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

		ВР-Н	BP-HUSKY REFINING LL	INING FFC - I	EAST SIDE M	IX DRUM H2S CN	IS REPORT FOR	.C - EAST SIDE MIX DRUM H2S CMS REPORT FOR 2ND QUARTER 2021	021	
	Reporting Requirement (choose one or both)	Reporting Requirement (choose one or both)	ACTUAL	DEVI INFOR	DEVIATION INFORMATION		CORRECTIVE ACTIONS /	WAS DEVIATION ATTRIBILITARI E TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE
EMISSIONS UNIT ID/Description			METHOD USED TO DETERMINE	DEVIATION DURATION	ON DESCRIPTION AND MAGNITUDE	PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE	MALFUNCTION? (Yes or No-	MALFUNCTIONS (See No (if no reports were made, state (if no	(If no reports were made, state
	Quarterly	Semi-Annual	Quarterly Semi-Annual COMPLIANCE	Date / Time Date / Time Start End	Time OF THE DEVIATION		MEAGOREO LAREN	ir res, continue to trie next column)	below)	NO REPORTS III tile space below)
B008 - Iso 2 Feed Heater B009 - Iso 2 Stabilzer Reboiler B010 - Iso 2 Splitter Reboiler	Yes	N	Continuous Monitoring System			No dow	No downtime or excess emissions during this reporting quarter.	ng this reporting quarter.		

Pollutant: H2S

Reporting Period Dates:

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

To:

Total CMS Downtime

operating time] %³

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5

percent of greater of the total operating time, both the summary report form and the excess emission report shall be

[Total CMS Downtime] x (100) / [Total source

July 1, 2021

-						
Company:	BP-Husl	BP-Husky Refining LLC				
Emission Limitation:	0.10 gr H ₂ S/dscf fuel gas on a 3-hr rolling average					
Address:	4001 Ce	edar Point Roa	d, Orego	on, Ohio 43616		
Monitor Manufacturer and Model No.:	Siemens	s Maxum II, SN	N: 30028	<u>3039490020</u>		
Date of Latest CMS Certification or Audit:	6/14/2021					
Process Unit(s) Description:	Reforme	r 3 Furnace (04	14802000	07B036)		
Total Source Operating Time in Reporting	Period ² :	2,184	hr	<u> </u>		
Emission Data Summary			CMS P	erfomance Summary		
1. Duration of excess emissions in reporting	period due	e to:	1. CM	S downtime in reporting period due to:		
a. Start-up/Shutdown:		0	a.	Monitor equipment malfunctions		
b. Control equipment problems		0	b.	Non-monitor equipment malfunctions		
c. Process Problems		0	C.	Quality assurance calibration		
d. Other known causes		0	d.	Other known causes		
e. Unknown causes		0	е.	Unknown causes		

0

0.00

From: <u>April 1, 2021</u>

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

submitted.

2. Total duration of excess emissions

[Total source operating time] %3

2 Record all times in hours.

³ For the reporting period:

3. Total duration of excess emissions x (100) /

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	Des Gillen
Title:	Presidemt এ BP-Husky Refining LLC
Date:	29-Jul-2021

0 0 0

0

0.00

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H ₂ S				
Reporting Period Dates:	From:	April 1, 2021	To:	July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 162 ppmv H₂S in fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30029994471080

Date of Latest CMS Certification or Audit: 6/14/2021

Process Unit(s) Description: Reformer 3 Furnace (0448020007B036)

Total Source Operating Time in Reporting Period²: 2,184 hr (Reformer 3 fuel gas was combusted for 2,184 hours and natural gas was combusted for 0 hours for a total of 2,184

hours this quarter)

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period du	e to:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	0.00	operating time] % ³	0.00
² Record all times in minutes			

Record all times in minutes.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

Docusigned by:

Des Gillen

Docusigned by:

Des Gillen

President

President - BP-Husky Refining LLC

Date:

29-Jul-2021

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

-						
Reporting Period Dates:	From:	April 1, 2021		To:	July 1, 2021	
Company:	BP-Hus	ky Refining LL	<u>.C</u>			
Emission Limitation:	60 ppm	60 ppmv H₂S in fuel gas on a 365-day rolling average				
Address:	4001 Ce	edar Point Roa	ad, (Oregon, Ohio 4	1 <u>3616</u>	
Monitor Manufacturer and Model No.:	Siemens	s Maxum II, Sl	N: 3	00299944710	<u>30</u>	
Date of Latest CMS Certification or Audit:	6/14/2021					
Process Unit(s) Description:	Reformer 3 Furnace (0448020007B036)					
Total Source Operating Time in Reporting	Period ² :	2,184		natural	ner 3 fuel gas was combusted for 2,184 h gas was combusted for 0 hours for a tota dis quarter)	
Emission Data Summary			CN	S Perfomanc	e Summary	
1. Duration of excess emissions in reporting	period du	e to:	1.	CMS downtim	ne in reporting period due to:	
a. Start-up/Shutdown:		0		a. Monitor e	quipment malfunctions	0
b. Control equipment problems		0		b. Non-moni	tor equipment malfunctions	0
c. Process Problems		0		c. Quality as	surance calibration	0
d. Other known causes		0		d. Other kno	wn causes	0
e. Unknown causes		0		e. Unknown	causes	0
2. Total duration of excess emissions		0	2.	Total CMS Do	owntime	0
 Total duration of excess emissions x (100) [Total source operating time] %³) /	0.00	3.	[Total CMS Doperating time	owntime] x (100) / [Total source e] % ³	0.0
² Record all times in minutes.						
					otal operating time or the total CMS dow form and the excess emission report sh	

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen—Docusigned by:
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

				BF	BP-HUSKY REI	EFINING LLC	FINING LLC - REFORMER 3 FURNACE H2S CMS REPORT FOR 2ND	S CMS REPORT FOR 2N	9		
GING	Reporting (Reporting Requirement (choose one or both)	CTOLL COLLECTION IN LATER CAN		DEVIATION INFORMATION	7			WAS DEVIATION	WAS DEVIATION MALFUNCTION VERBAL MALFUNCTION WRITTEN	MALFUNCTION WRITTEN
UNIT			2		DEVIATION DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No - (If no	MALFUNCTION? (Yes or No - (If no reports were made, state (If no reports were made, state	(If no reports were made, state
ID/Description Quarterly Semi-Annual	Quarterly	Semi-Annua	COMPLIANCE	Date / Time Start	Date / Time End	OF THE DEVIATION			If Yes, continue to the next column)	If Yes, continue to the next "NO KEPOKIS" in the space "NO KEPOKIS" in the space column) below) below)	"NO REPORTS" in the space below)
B036 - Reformer 3 Furnace	Yes	°Z	Continuous Monitoring System				No downtime or ex	No downtime or excess emissions during this reporting quarter.			

Pollutant:	H_2S
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 162 ppmv H₂S in fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30050531960100

Date of Latest CMS Certification or Audit: 6/9/2021

Process Unit(s) Description: East Flare (0448020007P003)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CMS Perfomance Summary		
1. Duration of excess emissions in reporting period due	to:	CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	2	d. Other known causes	1	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emissions	2	2. Total CMS Downtime	1	
3. Total duration of excess emissions x (100) /	0.09	3. [Total CMS Downtime] x (100) / [Total source	0.05	
[Total source operating time] %3	0.09	operating time] % ³	0.05	
² Record all times in minutes.				

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

DocuSigned by:

Signature:

Des Gillen

President - BP-Husky Refining LLC

Date:

29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

	MALFUNCTION VERBAL REPORT DATE If no reports were made, state (If no reports were made, state "NO REPORTS" in the space "NO REPORTS" in the space below)			NA	N/A		
	MALFUNCTION VERBAL REPORT DATE no reports were made, state (NO REPORTS" in the space below)			NA	N/A		
JARTER 2021	WAS DEVIATION	MALFUNCTION? (Yes or No - (If no reports were made, state (If no reports were were were were were were were wer	If Yes, continue to the next column)	No	No		
ING LLC - EAST FLARE H2S CMS REPORT FOR 2ND QUARTER 2021		CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN		Operational moves were made to minimize the impacts of the emergency ISO shutdown. The refinery reestablished power to the ISO unit and were able to susscribilly restart the East side flare gas recovery compressors and begin fully recovering gases.	DEMS downtime for 1 check sample flow following flaring Completed the maintenance. Sample flow confirmed good, returned to service.		
AST FLARE H2S CM	ST FLARE H2S CIV			Lost to power to iso triggering emergency shutdown	check sample flow following flaring event		
IING LLC - E/	NOI NOI	DESCRIPTION AND MAGNITUDE OF THE DEVIATION		CEMS excess emissions for 2 hours.	CEMS downtime for 1 hour.		
Y REFIN	DEVIATION INFORMATION	DEVIATION DURATION	Date / Time Date / Time Start End	5/9/21 22:00	4/5/21 13:00 4/5/21 14:00		
BP-HUSKY REFINI		DEVIATION	Date / Time Start	5/9/21 20:00	4/5/21 13:00		
	ACTIIAI METHOD	ACTUAL METHOD USED TO DETERMINE COMPLIANCE		ACTUAL METHOD JSED TO DETERMINE COMPLIANCE Confinuous Monitoring System			Continuous Monitoring System
	Reporting Requirement (choose one or both)		Quarterly Semi-Annual	Yes	°Z		
	Reporting (choose o		Quarterly	0 N	Yes		
		EMISSIONS UNIT ID/Description		P003 - East Flare	P003 - East Flare		

Pollutant: Total Sulfur

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: NA - Analyzer used to calculate SO₂ emissions

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-10430115

Date of Latest CMS Certification or Audit: TS Low: 6/08/2021; TS High: 6/08/2021

Process Unit(s) Description: East Flare (0448020007P003)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary			
Duration of excess emissions in reporting period due to:		CEMS downtime in reporting period due to:			
a. Start-up/Shutdown:	NA	a. Monitor equipment malfunctions	26		
b. Control equipment problems	NA	b. Non-monitor equipment malfunctions	0		
c. Process Problems	NA	c. Quality assurance calibration	0		
d. Other known causes	NA	d. Other known causes	6		
e. Unknown causes	NA	e. Unknown causes	0		
2. Total duration of excess emissions	NA	2. Total CEMS Downtime	32		
3. Total duration of excess emissions x (100) /	NA	3. [Total CEMS Downtime] x (100) / [Total source	1.47		
[Total source operating time] %3	INA	operating time] % ³	1.47		

² Record all times in minutes.

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

Docusigned by:

Des Gillen

90F20640AD13450...

Title:

President - BP-Husky Refining LLC

Date: 29-Jul-2021

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

	MALFUNCTION WRITTEN REPORT DATE	(If no re	below)	N/A	N/A	N/A
	MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state	below)	N/A	N/A	N/A
QUARTER 2021	WAS DEVIATION ATTRIBLITABLE TO A	MALFUNCTION? (Yes or No-	column)	O N	ON N	NO
REPORT FOR 2ND	CORRECTIVE ACTIONS /	PREVENTATIVE MEASURES		Tech checked cal gas flows, sample/cal valve operation. Recalibrated and returned analyzer to service.	Recalibrated and returned the analyzer to service	Recalibrated and returned the analyzer to service
NG LLC - EAST FLARE TS CMS REPORT FOR 2ND QUARTER 2021	PROBABLE CAUSE FOR THE DEVIATION		Analyzer failed low range span drift test. Low calibration gas did not appear to inject.	Replaced sample valving	High level drift	
			MAGNITUDE OF THE DEVIATION	CEMS downtime for 26 hours	CEMS downtime for 5 hours.	CEMS downtime for 1 hour.
KY REFI	DEVIATION INFORMATION	DEVIATION DURATION	Date / Time End	4/18/21 8:00 4/19/21 10:00	4/21/21 15:00	4/7/21 10:00 4/7/21 11:00
BP-HUSKY REFINI		DEVIATION	Date / Time Start	4/18/21 8:00	4/21/21 10:00 4/21/21 15:00	4/7/21 10:00
	ACTUAL METHOD	ACTUAL METHOD USED TO DETERMINE COMPLIANCE		Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System
	Reporting Requirement (choose one or both)	(choose one or both) Quarterly Semi-Annual		Yes	Yes	Yes
	Reporting (choose c		Quarterly	No	<u>8</u>	ON.
		EMISSIONS UNIT ID/Description		P003 - East Flare	P003 - East Flare	P003 - East Flare

Pollutant:	H_2S
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 162 ppmv H₂S in fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30050531960400

Date of Latest CMS Certification or Audit: 6/2/2021

West Flare Vent Gas (0448020007P004) **Process Unit(s) Description:**

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary	Emission Data Summary		CMS Perfomance Summary		
1. Duration of excess emissions in reporting period due to);	1. CMS downtime in reporting period due to:			
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	25		
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0		
c. Process Problems	0	c. Quality assurance calibration	0		
d. Other known causes	4	d. Other known causes	9		
e. Unknown causes	0	e. Unknown causes	0		
2. Total duration of excess emissions	4	2. Total CMS Downtime	34		
3. Total duration of excess emissions x (100) /	0.18	3. [Total CMS Downtime] x (100) / [Total source	1.56		
[Total source operating time] % ³	0.10	operating time] % ³	1.50		
² Record all times in minutes.					

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
Signature:	Des Gillen
Oignature.	90F20640AD13450
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of ³ For the reporting period: greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

Poll	uta	nt:	Н	₂ S
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

BP-Husky Refining LLC Company:

162 ppmv H₂S in fuel gas on a 3-hr rolling average **Emission Limitation:**

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 6/17/2021

Process Unit(s) Description: West Flare C Valve (0448020007P004)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary	Emission Data Summarv		
1. Duration of excess emissions in reporting period due to	Duration of excess emissions in reporting period due to:		
a. Start-up/Shutdown:	NA	a. Monitor equipment malfunctions	0
b. Control equipment problems	NA	b. Non-monitor equipment malfunctions	0
c. Process Problems	NA	c. Quality assurance calibration	0
d. Other known causes	NA	d. Other known causes	0
e. Unknown causes	NA	e. Unknown causes	0
2. Total duration of excess emissions	NA	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	NA ⁴	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	INA	operating time] % ³	0.00
² Record all times in minutes			_

Record all times in minutes.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
Signature:	Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	29-Jul-2021

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of ³ For the reporting period: greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

⁴ Excess emissions are reported in the West Flare Vent Gas section, and are not included in this section to avoid double counting.

¹ Form described in 40 CFR 60.7 (d)

MALFUNCTION WRITTEN	REPORT DATE	"NO REPORTS" in the space	N/A	NA	NA	NA
MALFUNCTION VERBAL	REPORT DATE	"NO REPORTS" in the space	N/A	N/A	N/A.	NA
WAS DEVIATION			°Z	ON.	°Z	°Ž
	CORRECTIVE ACTIONS /	PREVENTATIVE MEASURES TAKEN	Dried the sample system panel with N2, checked, recalibrated, and returned analyzer to service	Completed the PM and returned analyzer to service.	Tech took it out of span and completed the validation.	Operational moves were made to minimize the impacts of the emegapeny ISO studdown. The refinety resistalished power to the ISO unit and were able to susscriully restart the East side flare gas recovery compressors and begin fully recovering gases.
	PROBABLE CAUSE FOR THE	DEVIATION	Analyzer failed daily drift test Moisture present in sample system due to operational failure.	Monthly PM completed	Calibrated ahead of CGA test. Inadvertentty left in span	Lost to power to iso triggering emergency shutdown
NO	DESCRIPTION AND	MAGNITUDE OF THE DEVIATION	CEMS downtime for 25 hours	CEMS downtime for 4 hours.	CEMS downtime for 5 hours.	CEMS excess emissions for 4 hours.
DEVIATIO INFORMATI	DURATION	Date / Time End	4/18/21 8:00	4/26/21 14:00	6/3/21 15:00	5/9/21 19:00
		Date / Time Start	4/17/21 7:00		6/3/21 10:00	5/9/21 15:00
	ACTUAL METHOD	COMPLIANCE	Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System
Requirement ine or both)			Yes	No	N	Š
Reporting (Quarterly	S.	Yes	Yes	Yes
	EMISSIONS UNIT	ID/Description	P004 - West Flare	P004 - West Flare	P004 - West Flare	P004 - West Flare
	MALFUNCTION VERBAL	Reporting Requirement DEVIATION CROSS one or both) ACTUAL METHOD DEVIATION DURATION PROBABLE CAUSE FOR THE CORRECTIVE ACTIONS / MAIFINCTION YEAR OF No. 1ft normals satisface ATTRIBUTED A STATEMENT ATTRIB	Reporting Requirement ACTUAL METHOD COORTION Concern of Deviation Complement ACTUAL METHOD COORTION Concern of Deviation Complement Complemen	Reporting Requirement Catoose one or both Catoose one or bot	Reporting Requirement Cathods one or both	Reporting Requirement Conditionous Monitoring Page Time System No System Conditionous Monitoring Condition

Pollutant:	Total	Sulfur

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: NA - Analyzer used to calculate SO2 emissions

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-10440115

Date of Latest CMS Certification or Audit: TS Low: 6/07/2021; TS High: 6/07/2021

Process Unit(s) Description: West Flare Vent Gas (0448020007P004)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to	D :	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	NA	a. Monitor equipment malfunctions	30
b. Control equipment problems	NA	b. Non-monitor equipment malfunctions	0
c. Process Problems	NA	c. Quality assurance calibration	0
d. Other known causes	NA	d. Other known causes	3
e. Unknown causes	NA	e. Unknown causes	0
2. Total duration of excess emissions	NA	2. Total CEMS Downtime	33
3. Total duration of excess emissions x (100) /		3. [Total CEMS Downtime] x (100) / [Total source	1.51
[Total source operating time] % ³	NA NA	operating time] % ³	1.51
² Record all times in minutes.			

³ For the reporting period:

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

DocuSigned by:

Des Gillen

DocuSigned by:

Des Gillen

President - BP-Husky Refining LLC

Date: 29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total S	3ulfur
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: NA - Analyzer used to calculate SO2 emissions

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 6/18/2021

Process Unit(s) Description: West Flare C Valve (0448020007P004)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to	:	1. CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	NA	a. Monitor equipment malfunctions	0
b. Control equipment problems	NA	b. Non-monitor equipment malfunctions	96
c. Process Problems	NA	c. Quality assurance calibration	0
d. Other known causes	NA	d. Other known causes	0
e. Unknown causes	NA	e. Unknown causes	0
2. Total duration of excess emissions	NA	2. Total CEMS Downtime	96
3. Total duration of excess emissions x (100) /	NA	3. [Total CEMS Downtime] x (100) / [Total source	4.40
[Total source operating time] % ³	INA	operating time] % ³	4.40
² Record all times in minutes.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen	DocuSigned by:
Signature:		Des Gillen
Title:	President - E	L BP-Fillsky Reinfing LLC
Date:	29-Jul-2021	

¹ Form described in 40 CFR 60.7 (d)

	MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "NO REPORTS" in the space	pelow)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	MALFUNCTION VERBAL MALFI	(If no reports were made, state (If no re) "NO REPORTS" in the space "NO RE	below)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ARTER 2021	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION? (Yes or No - If Yes, continue to the next	column)	οN	ON	o _N	ON.	ON.	°N	No
ORT FOR 2ND QU	CORRECTIVE ACTIONS /	PREVENTATIVE MEASURES TAKEN		The tech set the regulator pressure to the proper PSI. Reacalibrated and returned analyzer to service.	Replaced power supply, recalibrated, and returned to service	Recalibrated and returned the analyzer to service	Completed checks and returned to service.			
BP-HUSKY REFINING LLC - WEST FLARE TS CMS REPORT FOR 2ND QUARTER 2021	THE GOT TO I MY THE WAY	DEVIATION		Found the low span calibration cylinder regulator set point low.	Sample cell power supply failed	Analyzer failed daily validation	Analyzer failed daily validation	Analyzer failed daily validation	High level drift	Additional calibration checks (following the maintenance conducted on 4/29
LLC - WEST F		DESCRIPTION AND	OF THE DEVIATION	CEMS downtime for 2 hours.	CEMS downtime for 28 hours	CEMS out-of-control time for 19 hours.	CEMS out-of-control time for 23 hours.	CEMS out-of-control time for 26 hours.	CEMS downtime for 1 hour.	CEMS downtime for 1 hour.
REFINING I	DEVIATION INFORMATION	DEVIATION DURATION	Date / Time End	4/4/21 9:00	4/29/21 11:00	4/30/21 11:00	4/29/21 6:00	4/4/21 9:00	4/8/21 12:00	4/30/21 11:00
BP-HUSK)		DEMATION	Date / Time Start	4/4/21 7:00	4/28/21 7:00	4/29/21 16:00	4/28/21 7:00	4/3/21 7:00	4/8/21 11:00	4/30/21 9:00
	ACTUAL METHOD	DETERMINE	COMPLIANCE	Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System	Continuous Monitoring System
	Reporting Requirement (choose one or both)		Semi-Annual	N _O	N N	N _O	Yes	Yes	Yes	Yes
	Reporting (Quarterly	Yes	Yes	Yes	No	No	_S	No
	HINITOINCIGORAL	ID/Description		P004 - West Flare	P004 - West Flare	P004 - West Flare	P004 - West Flare	P004 - West Flare	P004 - West Flare	P004 - West Flare

Pollutant: NOx

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 40 ppm_{vd} (30-day rolling average)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 02

Date of Latest CEMS Certification or Audit: 5/18/2021

Process Unit(s) Description: Reformer 3 Furnace (0448020007B036)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:		CEMS downtime in reporting period due to:	
a. Start-up/Shutdown	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	0
3. Total duration of excess emissions x (100) /	0.00	3. [Total CEMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³		operating time] % ³	

² Record all times in minutes.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:

Des Gillen

DocuSigned by:

Signature:

Des Gillen

90F20640AD13450...

Title:

President - BP-Husky Refining LLC

Date:

29-Jul-2021

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CEMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

				BP-HUSKY	REFINING	LLC - REFOR	BP-HUSKY REFINING LLC - REFORMER 3 FURNACE NOx CEMS REPORT FOR 2ND QUARTER 2021	S REPORT FOR 2ND QU	JARTER 2021		
	Reporting R (choose or	Reporting Requirement (choose one or both)			DEVIATION INFORMATION				WAS DEVIATION	MALFUNCTION VERBAL MALFUNCTION WRITTEN	MALFUNCTION WRITTEN
EMISSIONS UNIT		Semi	ACTUAL METHOD USED TO DETERMINE		DEVIATION DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No-	ALFUNCTION? (Yes or No - (If no reports were made, state (If no reports were made, state	(If no reports were made, state
	Quarterly	Annual	COMPLIANCE	Date / Time Start	Date / Time Start End	MAGNITUDE OF THE DEVIATION			If Yes, continue to the next column)	If Yes, continue to the next "NO REPORTS" in the space "NO REPORTS" in the space column)	"NO REPORTS" in the space below)
B036 - Reformer 3 Furnace	Yes	N N	Continuous Emission Monitoring System (CEMS)				No downtime or exce	No downtime or excess emissions during this reporting quarter.			

Pollutant: CO	
	F 4 14 0004

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: **BP-Husky Refining LLC**

Emission Limitation: 500 ppmv CO, db, 1-hr average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB URAS 14, SN: 3.240684.3

Date of Latest CEMS Certification or Audit: 5/19/2021

FCCU/CO Boiler Bypass, 0448020007P007 **Process Unit(s) Description:**

Total Source Operating Time in Reporting Period²: 0 hr

Emission Data Summary		CMS Perfomance Summary			
1. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:			
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0		
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0		
c. Process Problems	0	c. Quality assurance calibration	0		
d. Other known causes	0	d. Other known causes	0		
e. Unknown causes	0	e. Unknown causes	0		
2. Total duration of excess emissions	0	2. Total CMS Downtime	0		
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	0.00		
[Total source operating time] % ³		operating time] % ³			
2 Record all times in hours, hours of operation are defined as when FCCU feed was in the unit and the CO Boiler bypass stack was in service.					
		nt or greater of the total operating time or the total CMS downting the summary report form and the excess emission report shall			

Describe any changes since last quarter in CEMS, process, or controls. Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen DocuSigned by: Des Gillen Signature: -90F20640AD13450... Title: President - BP-Husky Refining LLC 29-Jul-2021

Date:

¹ Form described in 40 CFR 60.7 (d)

			BP-HU	BP-HUSKY REFINING	_	LC - FCC RI	EGEN VENT CO	CEMS REPOI	LLC - FCC REGEN VENT CO CEMS REPORT 2ND QUARTER 2021	R 2021		
	Reporting (choose	Reporting Requirement (choose one or both)	ACTIIAI		DEVIATION INFORMATION	NO.		CORRECTIVE	WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION WRITTEN	
EMISSIONS UNIT			METHOD USED	DEVIATION DURATION		DESCRIPTION AND	PROBABLE CAUSE FOR	ACTIONS /	ATTRIBUTABLE TO A MALFUNCTION? (Yes or No -	ATTRIBUTABLE TO A REPORT DATE MALFUNCTION? (Yes or No - (If no reports were made, state) (If no reports were made, state)	REPORT DATE (If no reports were made, sta	Φ
	Quarterly	Semi-Annual	Quarterly Semi-Annual COMPLIANCE	Date / Time Start End		MAGNITUDE OF THE DEVIATION		MEASURES TAKEN	If Yes, continue to the next column)	"No Reports" in the space below)	"No Reports" in the space below)	
P007 - FCCU / CO Boiler Bypass Stack	× Ses	o _N	Continuous Emissions Monitoring System (CEMS)			Bypass Si	tack not in operation during the	e quarter, therefore no e	Bypass Stack not in operation during the quarter, therefore no excess emissions or part 60 CEMS downtime to report.	IS downtime to report.		

Pollutant: NOx

Reporting Period Dates:

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

From: April 1, 2021

To:

July 1, 2021

Company:	BP-Husl	ky Refining	<u>LLC</u>	
Emission Limitation:	58.1 ppr	nv NOx db	@ 0% O2 (365-day rolling avg)	
Address:	4001 Ce	edar Point F	Road, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	ABB LIM	MAS 11UV	and ABB MAGNOS O2, SN: 3.240682.3	
Date of Latest CEMS Certification or Audit:	5/19/202	21		
Process Unit(s) Description:	FCCU/C	O Boiler B	ypass, 0448020007P007	
Total Source Operating Time in Reporting Period	od²:	0	<u>hr</u>	
Emission Data Summary			CMS Perfomance Summary	
1. Duration of excess emissions in reporting period	d due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	0
c. Process Problems		0	c. Quality assurance calibration	0
d. Other known causes		0	d. Other known causes	0
e. Unknown causes		0	e. Unknown causes	0
2. Total duration of excess emissions		0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /		0	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³			operating time] % ³	
2 Record all times in hours, hours of operation are defined as when FCCU feed wa			ss stack was in service. nt or greater of the total operating time or the total CMS downtime	
			the summary report form and the excess emission report shall be	
Describe any changes since last quarter in CEM	MS, proce	ess, or cor	itrols.	
Not Applicable - No changes since the previous quarter.				
I certify that the information contained in this re	eport is t	rue, accur	ate, and complete.	
Name: Des Gillen				
Signature: Des Gillen				

Title:

Date:

90F20640AD13450...

29-Jul-2021

President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Po	Ыc	uta	nt:	N	Эx
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 93.4 ppmv NOx db @ 0% O2 (7-day rolling avg)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS O2, SN: 3.240682.3

Date of Latest CEMS Certification or Audit: 5/19/2021

Process Unit(s) Description: FCCU/CO Boiler Bypass, 0448020007P007

Total Source Operating Time in Reporting Period²: 0 hr

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³ 2 Record all times in hours, hours of operation are defined as when FCCU feed was in the unit and	operating time] % ³		
			i- F
		nt or greater of the total operating time or the total CMS downtir the summary report form and the excess emission report shall I	

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
	90F20640AD13450
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

			BP-HUS	BP-HUSKY REFINING	_	LC - FCC RE	EGEN VENT NOX	CEMS REPC	LLC - FCC REGEN VENT NO $_{ m X}$ CEMS REPORT 2ND QUARTER 2021	IR 2021	
	Reporting (choose of	Reporting Requirement (choose one or both)	ACTUAL		DEVIATION INFORMATION	NOI.		CORRECTIVE	WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION VERBAL MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description			METHOD USED TO DETERMINE	DEVIATION DURATION	DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	ACTIONS / PREVENTATIVE	MALFUNCTION? (Yes or No -	≞	(If no reports were made, stat
	Quarterly	Semi-Annual	Quarterly Semi-Annual COMPLIANCE	Date / Time Date / Time Start End	Date / Time End	MAGNITUDE OF THE DEVIATION		MEASURES TAKEN	If Yes, continue to the next column)	∵No Keports∵in the space below)	.No Keports: In the space below)
P007 - FCCU / CO Boller Bypass Stack	Yes	No	Continuous Emissions Monitoring System (CEMS)			Bypass S	itack not in operation during th	e quarter, therefore no e	Bypass Stack not in operation during the quarter, therefore no excess emissions or part 60 CEMS downtime to report.	IS downtime to report.	

Pollutant: SO₂

Company:

Reporting Period Dates:

Emission Limitation:

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

To:

260 ppmvd SO2 at 0% excess O2 as a rolling 7-day average

July 1, 2021

From: April 1, 2021

BP-Husky Refining LLC

Address:	4001 Ce	edar Point I	Road	l, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	ABB LIM	MAS 11UV	and	ABB MAGNOS O2, SN: 3.240685.3	
Date of Latest CEMS Certification or Audit:	5/19/202	21			
Process Unit(s) Description:	FCCU/C	O Boiler By	oass,	0448020007P007	
Total Source Operating Time in Reporting Peri	od²:	0		<u>hr</u>	
Emission Data Summary			СМ	S Perfomance Summary	
1. Duration of excess emissions in reporting period	od due to:		1.	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0		a. Monitor equipment malfunctions	0
b. Control equipment problems		0		b. Non-monitor equipment malfunctions	0
c. Process Problems		0		c. Quality assurance calibration	0
d. Other known causes		0		d. Other known causes	0
e. Unknown causes		0		e. Unknown causes	0
2. Total duration of excess emissions		0	2.	Total CEMS Downtime	0
3. Total duration of excess emissions x (100) /		0	3.	[Total CEMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³ 2 Record all times in hours, hours of operation are defined as when FCCU feed w.	1- 11 11 d			operating time] % ³	
³ For the reporting period: If the total duration of exce	ess emissio	ns is 1 perce	nt or	greater of the total operating time or the total CMS downtin ummary report form and the excess emission report shall b	
Describe any changes since last quarter in CEI Not Applicable - No changes since the previous quarter. I certify that the information contained in this r	•	·			
Name: Des Gillen DocuSigned by:			-		

Signature:

Title:

Date:

Des Gillen

29-Jul-2021

90F20640AD13450...

President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Reporting Period Dates:

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

To:

July 1, 2021

Pollutant: SO ₂		

Company: BP-Husky Refining LLC

Emission Limitation: 160 ppmvd SO2 at 0% excess O2 as a rolling 365-day average

From: April 1, 2021

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS O2, SN: 3.240685.3

Date of Latest CEMS Certification or Audit: 5/19/2021

Process Unit(s) Description: FCCU/CO Boiler Bypass, 0448020007P007

Total Source Operating Time in Reporting Period²: 0 hr

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³	ting time] % ³ operating time] % ³		
2 Record all times in hours, hours of operation are defined as when FCCU feed was in the unit and	the CO Boiler bypa	ass stack was in service.	
		nt or greater of the total operating time or the total CMS downtir the summary report form and the excess emission report shall l	

Describe any changes since last quarter in CEMS, process, or controls.

submitted.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name: Des Gillen

Docusigned by:

Des Gillen

President - BP-Husky Refining LLC

Date: 29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO ₂				
Reporting Period Dates:	From:	April 1, 2021	To:	July 1, 2021

Company: <u>BP-Husky Refining LLC</u>

Emission Limitation: 1,020 tons SO2 per rolling 12-month period

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS O2, SN: 3.240685.3

Date of Latest CEMS Certification or Audit: 5/19/2021

Process Unit(s) Description: FCCU/CO Boiler Bypass, 0448020007P007

Total Source Operating Time in Reporting Period²: 0 hr

Emission Data Summary		CMS Perfomance Summary		
1. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	0	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emissions	0	2. Total CMS Downtime	0	
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	0.00	
[Total source operating time] % ³ operating time] % ³				
2 Record all times in hours. hours of operation are defined as when FCCU feed was in the unit and	2 Record all times in hours. hours of operation are defined as when FCCU feed was in the unit and the CO Boiler bypass stack was in service.			
To the reporting period.	•	nt or greater of the total operating time or the total CMS downting the summary report form and the excess emission report shall lead to the control of the		

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

Name:	Des Gillen
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021
Title:	President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO ₂				
Reporting Period Dates:	From:	April 1, 2021	To:	July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.92 lb SO2 per 1000 lb of fresh feed

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS O2, SN: 3.240685.3

Date of Latest CEMS Certification or Audit: 5/19/2021

Process Unit(s) Description: FCCU/CO Boiler Bypass, 0448020007P007

Total Source Operating Time in Reporting Period²: 0 hr

Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	0
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³		operating time] % ³	
2 Record all times in hours, hours of operation are defined as when FCCU feed was in the unit and	the CO Boiler bypa	ass stack was in service.	•
		nt or greater of the total operating time or the total CMS downtir the summary report form and the excess emission report shall	

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

			BP-HU	BP-HUSKY REFINING LI	NG LLC -	FCC R	EGEN VENT SO2	CEMS REPC	LC - FCC REGEN VENT SO2 CEMS REPORT 2ND QUARTER 2021	ER 2021	
	Reporting Requirement (choose one or both)	equirement e or both)	ACTUAL	DE	DEVIATION NFORMATION			CORRECTIVE	WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description			METHOD USED TO DETERMINE	DEVIATION DURATION		DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	ACTIONS / PREVENTATIVE	MALFUNCTION? (Yes or No-	MALEUNCTION (78 or No - (If no reports were made, state (If no reports	(If no reports were made, state
	Quarterly	Semi- Annual	COMPLIANCE	Date / Time Date / Time Start End		MAGNITUDE OF THE DEVIATION		MEASURES TAKEN	ir Yes, continue to the next column)	No Reports in the space	No Reports in the space
P007 - FCCU / CO Boiler Bypass Stack	Yes	o Z	Continuous Emissions Monitoring System (CEMS)			Bypass 5	stack not in operation during the	e quarter, therefore no e)	Bypass Stack not in operation during the quarter, therefore no excess emissions or part 60 CEMS downtime to report.	S downtime to report.	

Pollut	tant:	CO
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 500 ppmv CO, db, 1-hr average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB URAS 26, SN: 3.347698.3

Date of Latest CEMS Certification or Audit: 5/20/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to	D :	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	19
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	2
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	22
3. Total duration of excess emissions x (100) /	0	3. Total CEMS Downtime] x (100) / [Total source	1.01
[Total source operating time] % ³		operating time] % ³	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

	Ä	state	}					
	MALFUNCTION WRITTEN REPORT DATE	(If no re	(woled	N/A	N/A	N/A	N/A	N/A
121	MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state	below)	N/A	N/A	N/A	N/A	N/A
LLC - FCC/CO BOILER CO CEMS REPORT 2ND QUARTER 2021	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION? (Yes or No -	column)	N	N	No	No	No
AS REPORT	CORRECTIVE	ACTIONS / PREVENTATIVE	MEASURES TAKEN	Recalibrated and returned the analyzer to service	Completed calibrations	Completed calibrations	Repaired the analyzer shelter heating system.	Repaired the analyzer shelter heating system.
BOILER CO CEN		PROBABLE CAUSE FOR THE DEVIATION		Replaced sample cooler	CEMS downtime for Maintenance checks before 1 hour.	CEMS downtime for Maintenance checks before 1 hour.	The shelter's heater thermostat failed causing the analyzer to over heat and trip.	The shelter's heater thermostat failed causing the analyzer to over heat and trip.
LC - FCC/CO		DESCRIPTION AND	MAGNITUDE OF THE DEVIATION	CEMS downtime for 1 hour.	CEMS downtime for 1 hour.	CEMS downtime for 1 hour.	CEMS downtime for 4 hours.	CEMS downtime for 15 hours.
	DEVIATION INFORMATION	DEVIATION DURATION	Date / Time End	4/29/21 11:00	5/19/21 15:00	5/19/21 17:00	4/16/21 14:00	4/16/21 9:00
BP-HUSKY REFINING		DEVIATION	Date / Time Start	4/29/21 10:00	5/19/21 14:00	5/19/21 16:00	4/16/21 10:00	4/15/21 18:00
a	ACTUAL	METHOD USED TO DETERMINE	COMPLIANCE	Continuous Emissions Monitoring System (CEMS)	Continuous Emissions Monitoring System (CEMS)	Continuous Emissions Monitoring System (CEMS)	Continuous Emissions Monitoring System (CEMS)	Continuous Emissions Monitoring System (CEMS)
	Requirement,	Somi	Annual	o _N	o _N	o _N	o _N	o Z
	Reporting Requirement (choose one or both)		Quarterly	sək	sək	Yes	Yes	Yes
		EMISSIONS UNIT ID/Description		P007 - FCCU / CO Boiler Bypass Stack	P007 - FCCU / CO Boiler Bypass Stack			

P	oll	uta	nt:	Ν	Ox
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 93.4 ppmv NOx db @ 0% O2 (7-day rolling avg)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 5/20/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to	0:	1. CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	19
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	2
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	22
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	1.01
[Total source operating time] % ³ 2 Record all times in hours.		operating time] % ³	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

Name:	Des Gillen	DocuSigned by:
Signature:		Des Gillen
Title:	President - BP-	90F20640AD13450 Husky Refining LLC
Date:	29-Jul-2021	

¹ Form described in 40 CFR 60.7 (d)

Pollutant: NO	Jх
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 58.1 ppmv NOx db @ 0% O2 (365-day rolling avg)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 5/20/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary	CEMS Perfomance Summary		
1. Duration of excess emissions in reporting period due to	CEMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	19
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	2
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	22
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	1.01
[Total source operating time] % ³ 2 Record all times in hours.		operating time] % ³	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

Name:	Des GillenDocuSigned by:	
Signature:	Des Gillen	
Title:	President - BP-Husky Refining LLC	
Date:	29-Jul-2021	

¹ Form described in 40 CFR 60.7 (d)

	N E	state						
	MALFUNCTION WRITTEN REPORT DATE	(If no reports were made, state "No Reports" in the space	pelow)	ΝΆ	Υ/N	N/A	ΝΑ	٧/N
2021	MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state "No Reports" in the space	below)	N/A	ΝΑ	NVA	NVA	N/A
LLC - FCC/CO BOILER NOx CEMS REPORT 2ND QUARTER 2021	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION? (Yes or No - (If Yes, continue to the next column)		column)	O N	o Z	ON N	o Z	No N
EMS REPOR	CORRECTIVE	ACTIONS / PREVENTATIVE	MEASURES TAKEN	Repaired the analyzer shelter heating system.	Recalibrated and returned the analyzer to service	Completed calibrations	Completed calibrations	Repaired the analyzer shelter heating system.
D BOILER NOX C			The shelter's heater thermostat failed causing the analyzer to over heat and trip.	Replaced sample cooler	CEMS downtime for Maintenance checks before 1 hour.	CEMS downtime for Maintenance checks before 1 hour.	The shelter's heater thermostat failed causing the analyzer to over heat and trip.	
LC - FCC/C	No.	ESCRPTION AND MAGNITUDE F THE DEVIATION EMS downtime for 4 hours.		CEMS downtime for 1 hour.	CEMS downtime for 1 hour.	CEMS downtime for 1 hour.	CEMS downtime for 15 hours.	
	NOT P O		4/16/21 14:00	4/29/21 11:00	5/19/21 15:00	5/19/21 17:00	4/16/21 9:00	
BP-HUSKY REFINING		DEVIATION DURATION	Date / Time Start	4/16/21 10:00	4/29/21 10:00	5/19/21 14:00	5/19/21 16:00	4/15/21 18:00
BP-H(ACTUAL METHOD USED TO DETERMINE COMPLIANCE		Continuous Emissions Monitoring System (CEMS)	Continuous Emissions Monitoring System (CEMS)	Continuous Emissions Monitoring System (CEMS)	Continuous Emissions Monitoring System (CEMS)	Continuous Emissions Monitoring System (CEMS)	
	Reporting Requirement (choose one or both) Quarterly Semi-Annual Yes No		ON N	N _O	<u>8</u>	No		
	Reporting (choose		Quarterly	Yes	Yes	Yes	Yes	Yes
	EMISSIONS UNIT ID/Description One Poor - FCCU / CO Boiler Bypass Stack		P007 - FCCU / CO Boiler Bypass Stack	P007 - FCCU / CO Boiler Bypass Stack	P007 - FCCU / CO Boiler Bypass Stack	P007 - FCCU / CO Boiler Bypass Stack		

Pollutant: SO

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 260 ppmvd SO2 at 0% excess O2 as a rolling 7-day average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 5/20/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary	CEMS Perfomance Summary		
Duration of excess emissions in reporting period due to:		CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	19
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	2
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	22
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	1.01
[Total source operating time] % ³		operating time] % ³	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

Des Gillen
DocuSigned by:
Des Gillen
90F20640AD13450 President - BP-Husky Refining LLC
29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO ₂	2
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 160 ppmvd SO2 at 0% excess O2 as a rolling 365-day average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 5/20/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary		
Duration of excess emissions in reporting period due to:		CEMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	19	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	2	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emissions	0	2. Total CEMS Downtime	22	
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	1.01	
[Total source operating time] % ³ 2 Record all times in hours.		operating time] % ³		

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

Name:	Des Gillen
Signature:	DocuSigned by: Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO₂

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation:1,020 tons SO2 per rolling 12-month periodAddress:4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 5/20/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to	o:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	19
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	2
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	22
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	1.01
[Total source operating time] % ³		operating time] % ³	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:
Des Gillen
Docustigned by:

Des Gillen

90F20640AD13450...

Title:
President - BP-Husky Refining LLC

29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO₂

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.92 lb SO2 per 1000 lb of fresh feed

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 5/20/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to	o:	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	19
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	2
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	22
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	1.01
[Total source operating time] % ³ 2 Record all times in hours.		operating time] % ³	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

			BP-	HUSKY RE	FINING L	LC - FCC/C	BP-HUSKY REFINING LLC - FCC/CO BOILER SO2 CEMS REPORT 2ND QUARTER 2021	EMS REPOR	T 2ND QUARTER	2021	
	Reporting F (choose or	Reporting Requirement (choose one or both)	ACTUAL		DEVIATION INFORMATION	7		CORRECTIVE	WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION WRITTEN
EMISSIONS UNIT		Semi-	METHOD USED TO DETERMINE	DEVIATION DURATION	DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	ACTIONS / PREVENTATIVE	MALFUNCTION? (Yes or No -	te	=
-	Quarterly	Annual	COMPLIANCE	Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION		MEASURES TAKEN	If Yes, continue to the next column)	"No Keports" in the space below)	"No Reports" in the space below)
P007 - FCCU / CO Boiler Bypass Stack	Yes	οN	Continuous Emissions Monitoring System (CEMS)	4/16/21 10:00	4/16/21 14:00	CEMS downtime for 4 hours.	The shelter's heater thermostat failed causing the analyzer to over heat and trip.	Repaired the analyzer shelter heating system.	ON	N/A	N/A
P007 - FCCU / CO Boiler Bypass Stack	Yes	oN N	Continuous Emissions Monitoring System (CEMS)	4/29/21 10:00	4/29/21 11:00	CEMS downtime for 1 hour.	Replaced sample cooler	Recalibrated and returned the analyzer to service	ON	N/A	N/A
P007 - FCCU / CO Boiler Bypass Stack	Yes	ON	Continuous Emissions Monitoring System (CEMS)	5/19/21 14:00	5/19/21 15:00	CEMS downtime for 1 hour.	CEMS downtime for Maintenance checks before 1 hour.	Completed calibrations	ON.	N/A	N/A
P007 - FCCU / CO Boiler Bypass Stack	Yes	o _N	Continuous Emissions Monitoring System (CEMS)	5/19/21 16:00	5/19/21 17:00	CEMS downtime for 1 hour.	CEMS downtime for Maintenance checks before 1 hour.	Completed calibrations	O.	N/A	N/A
P007 - FCCU / CO Boiler Bypass Stack	Yes	o _N	Continuous Emissions Monitoring System (CEMS)	4/15/21 18:00	4/16/21 9:00	CEMS downtime for 15 hours.	The shelter's heater thermostat failed causing the analyzer to over heat and trip.	Repaired the analyzer shelter heating system.	o Z	N/A	N/A

Pollutant: SO₂

Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: **BP-Husky Refining LLC**

250 ppm SO₂ dry, 0% excess O₂ (12-hour average) **Emission Limitation:**

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Ametek Model 919, SN: ZB-919SP-10541-1 **Date of Latest CEMS Certification or Audit:** 5/28/2021

Process Unit(s) Description: #1 Claus Sulfur Recovery Unit with SCOT Unit (0448020007P009)

Total Source Operating Time in Reporting Period²: 1,890 hr

Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to):	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	4
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	5
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	9
3. Total duration of excess emissions x (100) /	0.00	3. [Total CEMS Downtime] x (100) / [Total source	0.48
[Total source operating time] % ³		operating time] % ³	

² Record all times in minutes.

Monitor Manufacturer and Model No.:

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Des Gillen Name: DocuSigned by Des Gillen Signature: 90F20640AD13450... Title: President - BP-Husky Refining LLC 29-Jul-2021 Date:

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent ³ For the reporting period: or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

¹ Form described in 40 CFR 60.7 (d)

	MALFUNCTION WRITTEN	(If no reports were made, state	below)	N/A	N/A	N/A	N/A
	MALFUNCTION VERBAL	(If no re	below)	N/A	N/A	N/A	N/A
UARTER 2021	WAS DEVIATION	MALFUNCTION? (Yes or No -	column)	ON	o _N	ON	o _N
ING LLC SRU #1 SO2 CEMS REPORT FOR 2ND QUARTER 2021	/SNOILOW EVILOBEROS	PREVENTATIVE MEASURES		Completed calibrations	Replaced gasket at sample probe, recalibrated, and returned to service	Completed calibrations	Completed calibrations
#1 SO2 CEMS R		PROBABLE CAUSE FOR THE DEVIATION		CEMS downtime for 3 Calibration checks ahead of hours. RATA testing	Leak in sample system	Calibration ahead of RATA	CEMS downtime for 1 Calibration ahead of RATA hour.
NG LLC SRU	NOI NOI	DESCRIPTION AND	OF THE DEVIATION	CEMS downtime for 3 hours.	CEMS downtime for 4 hours.	CEMS downtime for 1 hour.	CEMS downtime for 1 hour.
Y REFINI	DEVIATION INFORMATION	DEVIATION DURATION	Date / Time End	5/27/21 18:00	6/28/21 14:00	5/25/21 14:00	5/27/21 9:00
BP-HUSKY REFINI			Date / Time Start	5/27/21 15:00	6/28/21 10:00	5/25/21 13:00	5/27/21 8:00
	ACTILAL METHOD	USED TO DETERMINE		Continuous Emission Monitoring System (CEMS)	Continuous Emission Monitoring System (CEMS)	Continuous Emission Monitoring System (CEMS)	Continuous Emission Monitoring System
	Reporting Requirement (choose one or both)		Annual	N O	o N	N O	N _o
	_	te	Qualifei iy	Yes	Yes	Yes	Yes
		EMISSIONS UNIT ID/Description		P009 - Sulfur Recovery Unit #1	P009 - Sulfur Recovery Unit #1	P009 - Sulfur Recovery Unit #1	P009 - Sulfur Recovery Unit #1

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Po	llu	ta	nt:	S	O_2
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Reporting Period Dates: From: April 1, 2021 To: July 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 250 ppm SO₂ dry, 0% excess O₂ (12-hour average)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Ametek Model 919 and WDG-V, SN: ZX-919-10814-1

Date of Latest CEMS Certification or Audit: 5/26/2021

Process Unit(s) Description: Sulfur Recovery Units # 2 & #3 with TGT #2 (0448020007P037)

Total Source Operating Time in Reporting Period²: 2,184 hr

Emission Data Summary		CEMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	10
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	10
3. Total duration of excess emissions x (100) /	0.00	3. [Total CEMS Downtime] x (100) / [Total source	0.46
[Total source operating time] % ³ 2 Record all times in hours.		operating time] % ³	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

Additional Information Required under PTI # 04-1046

1. Total SO₂ emissions during calendar quarter (in tons), including any excess emissions attributed to the malfunction, startup, or shutdown of emissions unit P037. (ST&C III.A.iii)

Total SO₂ emissions from the TRP SRUs during the period April 1, 2021 through June 30, 2021 were calculated at 8.6 tons.

2. Total operating time of the CEMS while either SRU was online. (ST&C III.A.iii)

During the quarter, the total source operating time while either or both SRUs were in service was 2,184 hours. The CEMS was online and monitoring for 2,174 hours while either SRU was in service.

During the quarter, there was one (1) period of CEMS downtime for a total duration of 10 hours. Details of these events are summarized in the table attached.

3. Quantification of emissions routed from the SRU to the flare beginning with activation of the relief valve until the release is over. (ST&C VII.A)

For the 2nd quarter, there were no periods during the quarter when acid gas was sent to the TRP Acid Gas flare.

			Ш	BP-HUSKY REFININ	EFINING L	LC SRU #2 & (IG LLC SRU #2 & SRU #3 SO2 CEMS REPORT FOR 2ND QUARTER 2021	ORT FOR 2ND QUART	TER 2021		
	Reporting Requirement (choose one or both)	e or both)	COURT IN COU		DEVIATION INFORMATION				WAS DEVIATION	MALFUNCTION VERBAL MALFUNCTION WRITTEN	MALFUNCTION WRITTEN
EMISSIONS UNIT ID / Description		Semi-	TO DETERMINE	DEVIATION DURATION	URATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No -	MALFUNCTION? (Yes or No - (If no reports were made, state (If no reports were made, state	If no reports were made, state
	Quarterly	-	COMPLIANCE	Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION			If Yes, continue to the next column)	If yes, continue to the next no regords in the space column) below) below)	"No Keports" in the space below)
P037 - Sulfur Recovery Units #2 & #3	Yes	°Z	Continuous Emission Monitoring System	6/7/2021 22:00 6/8/2021	8:0	CEMS downtime for 10 hours.	Communication failure with ADM	Recalibrated and returned the analyzer to service	o _Z	Ϋ́N	A/N

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Pollutant: NOx						
Reporting Period Dates:	From:	April 1, 20	<u>21</u>	To:	July 1, 2021	
Company:	BP-Husl	ky Refining	LLC			
Address:	4001 Ce	edar Point	Road, C	regon, Ohio	<u>43616</u>	
Monitor Manufacturer and Model No.:	ABB LIN	MAS 11UV	and AB	B MAGNOS	<u>O2</u>	
Monitor Location:		port on Ea			ck; monitor housed at ground leve	l in an
Date of Latest CMS Cert or Audit:	5/13/202	<u>21</u>				
Process Unit(s) Description:	East Als	tom Boiler	(04480	20007B034)		
Total Source Operating Time in Reporting F	Period:	1,48	2 hr	•	gas was combusted for 43 hours and usted for 1,439 hours for a total of 1,4 er)	•
CMS operating time while emission unit wa	as in ope	ration: _	1,480	hr		
Emission Limitation:	12.71 lb	/hr of NO _x	<u>emissio</u>	ns;		
	38.5 ton	s/rolling 12	<u>-month</u>	period of NO	$D_{\rm x}$ emissions (combined B034 & B0	<u> </u>
	0.10 lb l	NO _x (as NO) ₂) per n	nmBtu heat i	nput 30-day rolling average	
Emission Data Summary			CMS P	erfomance	Summary	
1. Duration of excess emissions in reporting p	period du	e to:	1. CM	S downtime	in reporting period due to:	
a. Start-up/Shutdown:		0	a.	Monitor equ	uipment malfunctions	2
b. Control equipment problems		0	b.	Non-monito	or equipment malfunctions	0
c. Process Problems		0	c.	Quality ass	urance calibration	0

Emission Data Summary		CWS Performance Summary		
1. Duration of excess emissions in reporting period du	ue to:	CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	2	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	0	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emissions	0	2. Total CEMS Downtime	2	
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	0	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³		
 2 Record all times in hours. 3 For the reporting period: If the total duration of excess em 	nissions is 1	percent or greater of the total operating time or the total CMS dowr	itime is 5	
i di ule reporting period. Il the tetal daration el execce en		person or greater or and tetal eperating time of the total entre demi-		

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - No changes since last quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen —DocuSigned by:
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

East Alstom Boiler - 2nd Quarter 2021 Db Data

NSPS Db: Supplemental Reporting for NO_x CEM Records as required by 40 CFR 49b(i)

This table contains the information required by 60.49(g)(1-8).

Records for (g)(9-10) are provided in the NSPS Quarterly CEMS Report.

East Alstom Boiler (B034): 353 MMBtu/hr heater fired with refinery fuel gas and/or natural gas

Calculation Methodology: NO_x emissions (Ib/mmbtu) calculated from NO_x CEM (ppm) using Methodology in 40 CFR 60 Appendix A Method 19 and F factor of 8710 dscf/mmbtu from Method 19 Table 19-1 when natural gas fired; site-specific F factor determined from fuel analysis when refinery fuel gas fired.

NSPS Limit: 0.10 lb NO₂/MMBtu

		1101 0		IV ID NO _X /	
Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
4/1/2021	0.020	0.019	No	No	
4/2/2021	0.020	0.019	No	No	
4/3/2021	0.021	0.019	No	No	
4/4/2021	0.020	0.019	No	No	
4/5/2021	0.020	0.019	No	No	
4/6/2021	0.020	0.019	No	No	
4/7/2021	0.019	0.019	No	No	
4/8/2021	0.017	0.019	No	No	
4/9/2021	0.019	0.019	No	No	
4/10/2021	0.019	0.019	No	No	
4/11/2021	0.019	0.019	No	No	
4/12/2021	0.019	0.019	No	No	
4/13/2021	0.026	0.019	No	No	
4/14/2021	0.028	0.019	No	No	
4/15/2021	0.023	0.019	No	No	
4/16/2021	0.023	0.020	No	No	
4/17/2021	0.023	0.020	No	No	
4/18/2021	0.026	0.020	No	No	
4/19/2021	0.027	0.020	No	No	
4/20/2021	0.026	0.020	No	No	
4/21/2021	0.027	0.020	No	No	
4/22/2021	0.028	0.021	No	No	
4/23/2021	0.025	0.021	No	No	
4/24/2021	0.018	0.021	No	No	
4/25/2021	0.017	0.021	No	No	
4/26/2021	0.020	0.021	No	No	
4/27/2021	0.020	0.021	No	No	
4/28/2021	0.027	0.022	No	No	
4/29/2021	0.016	0.022	No	No	
4/30/2021	0.015	0.022	No	No	
5/1/2021	0.020	0.022	No	No	
5/2/2021	0.023	0.022	No	No	
5/3/2021	0.019	0.022	No	No	
5/4/2021	0.016	0.021	No	No	
5/5/2021	0.018	0.021	No	No	
5/6/2021	0.020	0.021	No	No	
5/7/2021	0.025	0.021	No	No	
5/8/2021		0.021	No	No	Boiler Not in Operation
5/9/2021		0.021	No	No	Boiler Not in Operation
5/10/2021		0.021	No	No	Boiler Not in Operation
5/11/2021		0.022	No	No	Boiler Not in Operation
5/12/2021		0.022	No	No	Boiler Not in Operation
5/13/2021		0.022	No	No	Boiler Not in Operation
5/14/2021		0.022	No	No	Boiler Not in Operation
5/15/2021		0.021	No	No	Boiler Not in Operation Boiler Not in Operation
5/16/2021		0.021	No	No	Boiler Not in Operation Boiler Not in Operation
5/17/2021		0.021	No	No	Boiler Not in Operation Boiler Not in Operation
5/18/2021		0.021	No	No	Boiler Not in Operation Boiler Not in Operation
5/18/2021		0.021	No No	No No	Boiler Not in Operation Boiler Not in Operation
5/20/2021		0.021		No No	'
5/20/2021		0.020	No No	No No	Boiler Not in Operation
5/21/2021			No No		Boiler Not in Operation
		0.019	No No	No No	Boiler Not in Operation
5/23/2021		0.019	No No	No No	Boiler Not in Operation
5/24/2021		0.019	No No	No	Boiler Not in Operation
5/25/2021		0.019	No No	No No	Boiler Not in Operation
5/26/2021		0.019	No	No	Boiler Not in Operation

Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
5/27/2021		0.019	No	No	Boiler Not in Operation
5/28/2021		0.018	No	No	Boiler Not in Operation
5/29/2021		0.018	No	No	Boiler Not in Operation
5/30/2021		0.019	No	No	Boiler Not in Operation
5/31/2021		0.018	No	No	Boiler Not in Operation
6/1/2021		0.018	No	No	Boiler Not in Operation
6/2/2021		0.017	No	No	Boiler Not in Operation
6/3/2021		0.017	No	No	Boiler Not in Operation
6/4/2021		0.017	No	No	Boiler Not in Operation
6/5/2021	0.031	0.023	No	No	
6/6/2021	0.025	0.028	No	No	
6/7/2021	0.023	0.026	No	No	
6/8/2021	0.023	0.025	No	No	
6/9/2021	0.023	0.025	No	No	
6/10/2021	0.022	0.024	No	No	
6/11/2021	0.022	0.024	No	No	
6/12/2021	0.022	0.024	No	No	
6/13/2021	0.017	0.023	No	No	
6/14/2021	0.011	0.022	No	No	
6/15/2021	0.015	0.021	No	No	
6/16/2021	0.023	0.021	No	No	
6/17/2021	0.024	0.022	No	No	
6/18/2021	0.024	0.022	No	No	
6/19/2021	0.024	0.022	No	No	
6/20/2021	0.024	0.022	No	No	
6/21/2021	0.024	0.022	No	No	
6/22/2021	0.026	0.022	No	No	
6/23/2021	0.026	0.023	No	No	
6/24/2021	0.025	0.023	No	No	
6/25/2021	0.023	0.023	No	No	
6/26/2021	0.023	0.023	No	No	
6/27/2021	0.022	0.023	No	No	
6/28/2021	0.021	0.023	No	No	
6/29/2021	0.021	0.023	No	No	

BP-HUSKY REFINING LLC - EAST ALSTOM BOILER NOx CEMS REPORT FOR 2ND QUARTER 2021

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	Reporting Requirement (choose one or both)	quirement o or both)	FOV		DEVIATION INFORMATION	NO.		T, ATO TO CO.	WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description			METHOD USED	DEVIATION DURATION	DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE	ACTIONS /	ATTRIBUTABLE TO A MALFUNCTION? (Yes or No -	REPORT DATE (If no reports were made, state (if no reports were made, state	REPORT DATE (If no reports were made, state
	Quarterly	Semi-Annual	COMPLIANCE	Date / Time Start	Date / Time End	Date / Time Date / Time OF THE DEVIATION Start End		MEASURES TAKEN	If Yes, continue to the next column)	"NO REPORTS" in the space "NO REPORTS" in the space below)	"NO REPORTS" in the space below)
B034 - East Alstom Boiler	Yes	≥ °Z	Continuous Monitoring System	6/11/21 7:00	21 7:00 6/11/21 9:00	CEMS out-of-control Analyzer failed daily time for 2 hours.		Recalibrated and returned the analyzer to service	92	NA	ΝΆ

Pollutant: NOx							
Reporting Period Dates:	From:	April 1, 20	021		To:	July 1, 2021	
Company:	BP-Hus	ky Refining	g LLC	<u>2</u>			
Address:	4001 Ce	edar Point	Road	d, Orego	on, Ohio	<u> 43616</u>	
Monitor Manufacturer and Model No.:	ABB LIN	//AS 11UV	and	ABB M	AGNOS	<u> 3 02</u>	
Monitor Location:		port on W r building a				ack; monitor housed at ground lev	el in an
Date of Latest CMS Certification or Audit:	5/13/202	<u>21</u>					
Process Unit(s) Description:	West Al	stom Boile	er (04	148020	007B03	<u>5)</u>	
Total Source Operating Time in Reporting Per	riod:	2,18	34	hr g		gas was combusted for 1,850 hours a combusted for 334 hours for a total of er)	
CMS operating time while emission unit was in operation: 2,182 hr							
Emission Limitation:	<u>12.71 lb</u>	/hr of NO _x	emis	sions;			
	38.5 ton	s/rolling 12	<u>2-mo</u>	nth peri	od of N	O _v emissions (combined B034 & B	<u>8035);</u>
	0.10 lb NO₂ (as NO₂) per mmBtu heat input 30-day rolling average						
Emission Data Summary			СМ	S Perfo	mance	Summary	
1. Duration of excess emissions in reporting per	iod due to	D :	1.	CMS d	owntime	e in reporting period due to:	
a. Start-up/Shutdown:		0		a. Moı	nitor equ	uipment malfunctions	2
b. Control equipment problems		0		b. Nor	n-monito	or equipment malfunctions	0
c. Process Problems		0		c. Qua	ality ass	urance calibration	0
d. Other known causes		0		d. Oth	er know	n causes	0
e. Unknown causes		0		e. Unk	nown c	auses	0
2. Total duration of excess emissions		0	2.	Total C	EMS D	owntime	2
3. Total duration of excess emissions x (100) / [Total source operating time] % ³		0	1	_	CMS Do	wntime] x (100) / [Total source %3	0.09
 Record all times in hours. For the reporting period: If the total duration of exceptions are supported in the support of the suppo	cess emissi	ons is 1 per	cent o	r greater	of the to	tal operating time or the total CMS downt	ime is 5

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - No changes since last quarter.

I certify that the information contained in this report is true, accurate, and complete.

Des Gillen
Des Gillen
90F20640AD13450 President - BP-Husky Refining LLC
29-Jul-2021

¹ Form described in 40 CFR 60.7 (d)

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MALFUNCTION WRITTEN REPORT DATE	MALFUTION (Yes on No - (If no reports were made, state (If no reports were made, state Wo perports were were were were were were were wer	N/A	
MALFUNCTION VERBAL REPORT DATE	(If no reports were made, state (If no reports were made, state "NO BEDODYE" in the sense.	N/A	
WAS DEVIATION ATTRIBLITABLE TO A	MALFUNCTION? (Yes or No-	ON	
0	ACTIONS / PREVENTATIVE	Recalibrated and returned the analyzer to service	
PROBABI E CALISE	FOR THE		CEMS out-of-control Analyzer falled daily time for 2 hours.
NOI NOI	ION DESCRIPTION AND	MAGNITUDE OF THE DEVIATION	
DEVIATION INFORMATION	DURATION	Date / Time End	6/11/21 7:00 6/11/21 9:00
	DEVIATION DURATIO	Date / Time Date / 1 Start Enc	6/11/21 7:00
ACTUAL	METHOD USED TO DETERMINE	Quarterly Semi-Annual COMPLIANCE	Continuous Monitoring System
Reporting Requirement (choose one or both)		Semi-Annua	ON.
		Quarterly	Yes
	EMISSIONS UNIT ID/Description		B035 - West Alstom Boiler

West Alstom Boiler - 2nd Quarter 2021 Db Data

NSPS Db: Supplemental Reporting for NO_x CEM Records as required by 40 CFR 49b(i)

This table contains the information required by 60.49(g)(1-8). Records for (g)(9-10) are provided in the NSPS Quarterly CEMS Report.

West Alstom Boiler (B035): 353 MMBtu/hr heater fired with refinery fuel gas and/or natural gas

Calculation Methodology: NO_x emissions (lb/mmbtu) calculated from NO_x CEM (ppm) using Methodology in 40 CFR 60 Appendix A Method 19 and F factor of 8710 dscf/mmbtu from Method 19 Table 19-1 when natural gas fired; site-specific F factor determined from fuel analysis when refinery fuel gas fired.

NSPS Limit: 0.10 lb NO₂/MMBtu

		NOFO	Lillille. O.	<u>у</u> Ои аі от	WINTER
Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
4/1/2021	0.025	0.022	No	No	
4/2/2021	0.025	0.022	No	No	
4/3/2021	0.024	0.022	No	No	
4/4/2021	0.024	0.023	No	No	
4/5/2021	0.023	0.023	No	No	
4/6/2021	0.023	0.023	No	No	
4/7/2021	0.023	0.023	No	No	
4/8/2021	0.022	0.023	No	No	
4/9/2021	0.023	0.023	No	No	
4/10/2021	0.022	0.023	No	No	
4/11/2021	0.023	0.023	No	No	
4/12/2021	0.023	0.023	No	No	
4/13/2021	0.024	0.023	No	No	
4/14/2021	0.024	0.023	No	No	
4/15/2021	0.030	0.023	No	No	
4/16/2021	0.030	0.024	No	No	
4/17/2021	0.028	0.024	No	No	
4/18/2021	0.028	0.024	No	No	
4/19/2021	0.026	0.024	No	No	
4/20/2021	0.026	0.024	No	No	
4/21/2021	0.027	0.024	No	No	
4/22/2021	0.027	0.024	No	No	
4/23/2021	0.027	0.025	No	No	
4/24/2021	0.024	0.025	No	No	
4/25/2021	0.025	0.025	No	No	
4/26/2021	0.026	0.025	No	No	
4/27/2021	0.029	0.025	No	No	
4/28/2021	0.031	0.025	No	No	
4/29/2021	0.028	0.025	No	No	
4/30/2021	0.029	0.026	No	No	
5/1/2021	0.029	0.026	No	No	
5/2/2021	0.030	0.026	No	No	
5/3/2021	0.028	0.026	No	No	
5/4/2021	0.029	0.026	No	No	
5/5/2021	0.030	0.026	No	No	
5/6/2021	0.029	0.027	No	No	
5/7/2021	0.028	0.027	No	No	
5/8/2021	0.027	0.027	No	No	
5/9/2021	0.026	0.027	No	No	
5/10/2021	0.026	0.027	No	No	
5/11/2021	0.026	0.027	No	No	
5/12/2021	0.026	0.027	No	No	
5/13/2021	0.026	0.027	No	No	
5/14/2021	0.026	0.028	No	No	
5/15/2021	0.026	0.027	No	No	
5/16/2021	0.026	0.027	No	No	
5/17/2021	0.026	0.027	No No	No	
5/18/2021	0.025	0.027	No No	No	
5/19/2021	0.027	0.027	No No	No	
5/20/2021	0.026	0.027	No No	No	
5/21/2021	0.026	0.027	No No	No	
5/22/2021	0.025	0.027	No No	No	
5/23/2021	0.022	0.027	No No	No	
5/24/2021	0.021	0.027	No No	No	
5/25/2021	0.023	0.027	No No	No	
5/26/2021	0.024	0.027	No No	No	
5/27/2021	0.024	0.026	No	No	

Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
5/28/2021	0.026	0.026	No	No	
5/29/2021	0.025	0.026	No	No	
5/30/2021	0.023	0.026	No	No	
5/31/2021	0.022	0.026	No	No	
6/1/2021	0.021	0.025	No	No	
6/2/2021	0.021	0.025	No	No	
6/3/2021	0.023	0.025	No	No	
6/4/2021	0.023	0.025	No	No	
6/5/2021	0.022	0.025	No	No	
6/6/2021	0.021	0.024	No	No	
6/7/2021	0.020	0.024	No	No	
6/8/2021	0.022	0.024	No	No	
6/9/2021	0.024	0.024	No	No	
6/10/2021	0.027	0.024	No	No	
6/11/2021	0.025	0.024	No	No	
6/12/2021	0.023	0.024	No	No	
6/13/2021	0.019	0.024	No	No	
6/14/2021	0.014	0.023	No	No	
6/15/2021	0.016	0.023	No	No	
6/16/2021	0.016	0.023	No	No	
6/17/2021	0.016	0.022	No	No	
6/18/2021	0.015	0.022	No	No	
6/19/2021	0.015	0.021	No	No	
6/20/2021	0.018	0.021	No	No	
6/21/2021	0.026	0.021	No	No	
6/22/2021	0.026	0.021	No	No	
6/23/2021	0.026	0.022	No	No	
6/24/2021	0.025	0.022	No	No	
6/25/2021	0.023	0.022	No	No	
6/26/2021	0.023	0.022	No	No	
6/27/2021	0.023	0.021	No	No	
6/28/2021	0.023	0.021	No	No	
6/29/2021	0.022	0.021	No	No	

Attachment B – Data Assessment Report

Data Assessment Report - East Side Fuel Gas Mix Drum H2S CMS

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B008, B009, B010

Siemens		Model #: Maxim		CEMS S 3002	erial #: 28039490020	
CEMS type: CEI Hydrogen Sulfide		CEMS	sampling loc East Side		s Mix Drum	
CEMS span values as per the applicable regulation:						
	<u>PPM</u>				<u>Percent</u>	
SO ₂			O ₂			
H₂S	300		CO ₂			

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S ((ppm)
	Audit #1	Audit #2
1. Date of audit	6/14/2021	6/14/2021
2. Cylinder ID number	CC416478	CC482384
Vendor	AirGas	AirGas
3. Date of certification	12/8/2020	11/11/2019
Expiration date	12/8/2023	11/11/2022
4. Type of certification	EPA Protocol	EPA Protocol
5. Certified audit value	74.18	163.50
6. CEMS response values	73.96	162.68
	72.40	161.67
	73.41	161.48
Average	73.26	161.94
7. Accuracy	-1.24%	-0.95%

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods.
 - a. Dates:
- None
- b. Number of days: NA
- 2. Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report - TIU Fuel Gas Mix Drum H2S CMS

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B015, B017, B019, B022, B029, B030, B031, B032, B033, B035,

P007

CEMS Manufacturer: Siemens	Model #: Maxim II		-	Serial #: 020117999300
CEMS type: Hydrogen Sulfide		CEMS sampling location: TIU Fuel Gas Mix Drum		
CEMS span values as	CEMS span values as per the applicable regulation:			
	<u>PPM</u>			<u>Percent</u>
SO ₂		O ₂		
H₂S	300	CO ₂		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S ((ppm)
	Audit #1	Audit #2
1. Date of audit	6/17/2021	6/17/2021
2. Cylinder ID number	CC408964	CC482384
Vendor	AirGas	AirGas
3. Date of certification	11/19/2018	11/11/2019
Expiration date	11/19/2021	11/11/2022
4. Type of certification	EPA Protocol	EPA Protocol
5. Certified audit value	74.18	163.50
6. CEMS response values	75.70	162.10
	74.34	164.32
	81.33	165.68
Average	77.12	164.03
7. Accuracy	3.96%	0.32%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - 2. Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - Reformer 3 Heater H₂S CMS

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B036

CEMS Manufacturer: Siemens		Model #: CEMS S Maxim II		Serial #: 30029994471080	
CEMS type: Hydrogen Sulfide		CEMS sampling location: Reformer 3 Heater Fuel Gas			as
CEMS span values as	per the ap	plicable regulation	on:		
		<u>PPM</u>			<u>Percent</u>
SO ₂			O ₂		
H ₂ S		300	CO ₂		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S	(ppm)
	Audit #1	Audit #2
1. Date of audit	6/14/2021	6/14/2021
2. Cylinder ID number	CC416478	CC482384
Vendor	AirGas	AirGas
3. Date of certification	11/19/2018	11/11/2019
Expiration date	11/19/2021	11/11/2022
4. Type of certification	EPA Protocol	EPA Protocol
5. Certified audit value	74.18	163.50
6. CEMS response values	81.62	157.42
	73.70	166.15
	71.08	159.92
Average	75.47	161.16
7. Accuracy	1.74%	-1.43%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - 2. Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - East Flare H2S CMS

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P003

CEMS Manufacturer: Siemens		Model #: Maxim II		CEMS	S Serial #: 30050531960100
CEMS type: Hydrogen Sulfide		CEMS sampling location: East Flare			
CEMS span values as	per the	applicable regula	tion:		
		<u>PPM</u>			<u>Percent</u>
SO ₂			O ₂		
H ₂ S		300	CO ₂		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S ((ppm)
	Audit #1	Audit #2
1. Date of audit	6/9/2021	6/9/2021
2. Cylinder ID number	CC416478	CC482384
Vendor	AirGas	AirGas
3. Date of certification	11/19/2018	11/11/2019
Expiration date	11/19/2021	11/11/2022
4. Type of certification	EPA Protocol	EPA Protocol
5. Certified audit value	74.18	163.50
6. CEMS response values	72.67	162.23
	73.81	163.73
	75.16	164.57
Average	73.88	163.51
7. Accuracy	-0.40%	0.01%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - 2. Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - West Flare H₂S CMS

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC **Plant name:** Toledo Refinery

Source unit #: P004

CEMS Manufacturer: Siemens		Model #: Maxim II		CEMS	S Serial #: 30050531960400
CEMS type: Hydrogen Sulfide		CEMS sampling location: West Flare			
CEMS span values as	per the	applicable regula	tion:		
		<u>PPM</u>			<u>Percent</u>
SO ₂			O ₂		
H ₂ S		300	CO ₂		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S	(ppm)
	Audit #1	Audit #2
1. Date of audit	6/2/2021	6/2/2021
2. Cylinder ID number	CC408964	CC482384
Vendor	AirGas	AirGas
3. Date of certification	11/19/2018	11/11/2019
Expiration date	11/19/2021	11/11/2022
4. Type of certification	EPA Protocol	EPA Protocol
5. Certified audit value	74.60	163.50
6. CEMS response values	76.82	159.53
	75.34	156.71
	77.06	158.87
Average	76.41	158.37
7. Accuracy	2.43%	-3.14%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - 2. Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - East Flare TS CMS

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P003

CEMS Manufacturer: Model #: ThermoFisher Sola II				CEMS Serial #: SL-10430115
CEMS type: Total Sulfur		CEMS sampling location: East Flare		
CEMS span values as per the applicable regula			tion:	
		<u>PPM</u>		
TS (low)	3,500			
TS (high)		350,000		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for: (Not Applicable)

B. Cylinder gas audit (CGA) for TS Low (ppm) and TS High (ppm):

	TS Low		TSI	High
	Audit #1	Audit #2	Audit #1	Audit #2
1. Date of audit	6/8/2021	6/8/2021	6/8/2021	6/8/2021
2. Cylinder ID number	CC427785	CC269487	CC121778	AA073391
Vendor	Airgas	Airgas	Airgas	Airgas
3. Date of certification	3/13/2019	4/27/2021	3/18/2019	3/7/2019
Expiration date	3/13/2022	4/27/2024	3/18/2022	3/7/2027
4. Type of certification	RATA Class	RATA Class	RATA Class	EPA Protocol
5. Certified audit value	884.0	1,931	87,110	192,500
6. CEMS response values	946.5	2,057	86,818	191,562
	935.3	2,005	87,032	192,293
	925.3	1,994	87,245	192,269
Average	935.7	2,018.7	87,032	192,041
7. Accuracy	5.85%	4.54%	-0.09%	-0.24%

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.

a. Dates: None

b. Number of days: NA

- Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - West Flare TS CMS

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC **Plant name:** Toledo Refinery

Source unit #: P004

CEMS Manufacturer: Model #: ThermoFisher Sola II				CEMS Serial #: SL-10440115
CEMS type: Total Sulfur		CEMS sampling location: West Flare		
CEMS span values as per the applicable regula			tion:	
		<u>PPM</u>		
TS (low)		3,500		
TS (high)		350,000		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for: (Not Applicable)

B. Cylinder gas audit (CGA) for TS Low (ppm) and TS High (ppm):

	TS Low		TS I	High
	Audit #1	Audit #2	Audit #1	Audit #2
1. Date of audit	6/7/2021	6/7/2021	6/7/2021	6/7/2021
2. Cylinder ID number	CC315721	CC75507	CC62361	XC033782B
Vendor	Airgas	Airgas	Airgas	Airgas
3. Date of certification	3/13/2019	12/22/2020	3/18/2019	10/21/2020
Expiration date	3/13/2022	12/22/2023	3/18/2027	10/21/2021
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class
5. Certified audit value	884.3	1,940.0	86,970	192,500
6. CEMS response values	883.4	1,975.2	89,796	197,092
	884.9	1,965.4	89,472	197,358
	883.5	1,959.4	89,728	197,688
Average	883.9	1,966.7	89,665	197,379
7. Accuracy	-0.05%	1.38%	3.10%	2.53%

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.

a. Dates: None

b. Number of days: NA

2. Corrective action taken: NA

3. Results of audit following corrective action. (Use format of A, B, or C above.)

Data Assessment Report - TIU Fuel Gas Mix Drum TS CMS

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B015, B017, B019, B022, B029, B030, B031, B032, B033, B034

B035, P007

CEMS Manufacturer: ThermoFisher		Model #: Sola II		CEMS Serial #: SL-09030713
CEMS type: Total Sulfur	CEMS sampling location: TIU Fuel Gas Mix Drum			
CEMS span values as per the applicable regula			tion:	
		<u>PPM</u>		
TS		3,500		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for:

		TS (ppm)	
		Audit #1	Audit #2
1.	Date of audit	6/18/2021	6/18/2021
2.	Cylinder ID number	CC338715	CC218822
	Vendor	Airgas	Airgas
3.	Date of certification	3/13/2019	3/31/2020
	Expiration date	3/13/2022	3/31/2023
4.	Type of certification	RATA Class	RATA Class
5.	Certified audit value	884.70	1844.00
6.	CEMS response values	829.70	1905.35
	·	825.43	1912.83
		831.84	1893.03
	Average	828.99	1903.74
7.	Accuracy	-6.30%	3.24%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - Reformer 3 Heater NO_x/O₂ CEM

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B036

O ₂ CEMS Manufacturer:			del #:	CEI	MS Serial #
ABB		IV	IAGNOS 106		3.340932.7
NO _x CEMS Manufacture	r:	Мо	del #:	CEI	MS Serial #
ABB			LIMAS 11		3.340287.1
CEMS sampling location	CEMS sampling location: Reformer 3 Heater stack				
CEMS span values as per the applicable regulation:					
	<u>PPM</u>				<u>Percent</u>
SO ₂			O ₂		25
NO _x	200		CO ₂		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for NO_x (ppm):

		Vivicom	PI
1.	Date of audit:	5/18/2021	5/18/2021
2.	Reference method (RM) used:	Method 7E	Method 7E
3.	Average RM value:	33.32	33.65
4.	Average CEMS value:	29.85	29.81
5.	Absolute value of mean difference:	3.47	3.84
6.	Confidence coefficient:	0.550	0.656
7	Percent relative accuracy:	12.05	13.37
۲.	(based on applicable standard)	12.03	15.57

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

A. Relative accuracy test audit (RATA) for O₂ (%):

		Vivicom	PI
1.	Date of audit:	5/18/2021	5/18/2021
2.	Reference method (RM) used:	Method 3A	Method 3A
3.	Average RM value:	6.07	6.07
4.	Average CEMS value:	6.10	6.09
5.	Absolute value of mean difference:	0.03	0.03
6.	Confidence coefficient:	0.005	0.006
7.	Percent relative accuracy: (based on applicable standard)	0.64	0.56

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

- B. Cylinder gas audit (CGA) for O_2 (%) and NO_x (ppm): (Not Applicable this quarter)
- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods: None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – East Alstom Boiler NO_x/O₂ CEM

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B034

O ₂ CEMS Manufacturer: ABB		Model #: MAGNOS 106		MS Serial # 400003357006	
NO _x CEMS Manufacturer: ABB		Model #: LIMAS 11		CEMS Serial # 00400003362206	
CEMS sampling location: East Alstom Boiler stack					
CEMS span values as per the applicable regulation:					
	<u>PPM</u>			<u>Percent</u>	
SO ₂		O ₂		20.0	
NO _x	100	CO ₂			

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for O₂ (% by vol. db):

		Vivicom	PI
1.	Date of audit:	4/14/2021	4/14/2021
2.	Reference method (RM) used:	Method 3A	Method 3A
3.	Average RM value:	4.22	4.20
4.	Average CEMS value:	4.23	4.19
5.	Absolute value of mean difference:	0.004	0.010
6.	Confidence coefficient:	0.024	0.030
7.	Percent relative accuracy	0.67	0.95
	(based on RM values):	0.07	0.90

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		-

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for NO_x (ppmv db):

		Vivicom	PI
1.	Date of audit:	4/14/2021	4/14/2021
2.	Reference method (RM) used:	Method 7E	Method 7E
3.	Average RM value:	24.5	24.5
4.	Average CEMS value:	25.5	25.4
5.	Absolute value of mean difference:	1.07	0.98
6.	Confidence coefficient:	0.128	0.154
7.	Percent relative accuracy	4.89	4.64
	(based on RM values):	4.09	4.04

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for NO_x Emission Rate (lb/MMBTU):

		Vivicom
1.	Date of audit:	4/14/2021
2.	Reference method (RM) used:	Method 7E
3.	Average RM value:	0.032
4.	Average CEMS value:	0.033
5.	Absolute value of mean difference:	0.002
6.	Confidence coefficient:	0.000
7.	Percent relative accuracy	6.06
	(based on RM values):	0.00

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

B. Cylinder gas audit (CGA) for O₂ (%):

	O ₂		
	Audit #1	Audit #2	Audit #3
1. Date of audit	5/13/2021	5/13/2021	5/13/2021
2. Cylinder ID number	BLM005117	BAL5136	CC443265
Vendor	Airgas	Air Liquide	Airgas
3. Date of certification	5/22/2020	8/30/2020	5/13/2020
Expiration date	5/22/2028	8/30/2024	5/13/2028
4. Type of certification	RATA Class	RATA Class	RATA Class
5. Certified audit value	5.55	11.00	18.03
6. CEMS response values	5.55	11.17	18.34
	5.52	11.16	18.34
	5.51	11.16	18.34
Average:	5.53	11.16	18.34
7. Accuracy	-0.36%	1.45%	1.72%

B. Cylinder gas audit (CGA) for NO_x (ppm):

		NOx	
	Audit #1	Audit #2	Audit #3
1. Date of audit	5/13/2021	5/13/2021	5/13/2021
2. Cylinder ID number	BAL5293	XL000366B	ALM029205
Vendor	Air Liquide	Airgas	Airgas
3. Date of certification	11/2/2018	11/21/2017	2/3/2020
Expiration date	11/2/2021	11/21/2025	2/3/2028
4. Type of certification	RATA Class	RATA Class	RATA Class
5. Certified audit value	23.53	54.79	91.00
6. CEMS response values	23.66	55.25	91.24
	23.72	55.49	91.31
	23.77	55.39	91.60
Average:	23.72	55.38	91.38
7. Accuracy	0.81%	1.08%	0.42%

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
- 2. Corrective action taken:
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report – West Alstom Boiler NO_x/O₂ CEM

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B035

O ₂ CEMS Manufacturer: ABB		Model #: MAGNOS 106		MS Serial # 100003354606	
NO _x CEMS Manufacturer: ABB		Model #: LIMAS 11		CEMS Serial # 00400003361106	
CEMS sampling location: West Alstom Boiler stack					
CEMS span values as per the applicable regulation:					
			<u>Percent</u>		
SO ₂		O ₂		20.0	
NO _x	100	CO ₂			

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for O₂ (% by vol. db):

		Vivicom	PI
1.	Date of audit:	4/15/2021	4/15/2021
2.	Reference method (RM) used:	Method 3A	Method 3A
3.	Average RM value:	3.589	3.611
4.	Average CEMS value:	3.584	3.607
5.	Absolute value of mean difference:	0.01	0.03
6.	Confidence coefficient:	NA	NA
7.	Percent relative accuracy	0.02	0.04
	(based on RM values):	0.02	0.04

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for NO_x (ppmv db):

		Vivicom	PI
1.	Date of audit:	4/15/2021	4/15/2021
2.	Reference method (RM) used:	Method 7E	Method 7E
3.	Average RM value:	24.1	24.1
4.	Average CEMS value:	24.6	24.6
5.	Absolute value of mean difference:	0.6	0.5
6.	Confidence coefficient:	0.061	0.067
7.	Percent relative accuracy	2.54	2.38
	(based on RM values):	2.54	2.30

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for NO_x Emission Rate (lb/MMBtu):

		Vivicom
1.	Date of audit:	4/15/2021
2.	Reference method (RM) used:	Method 7E
3.	Average RM value:	0.030
4.	Average CEMS value:	0.031
5.	Absolute value of mean difference:	0.001
6.	Confidence coefficient:	0.000
7.	Percent relative accuracy	3.17
	(based on RM values):	3.17

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

B. Cylinder gas audit (CGA) for O₂ (%):

	O ₂		
	Audit #1	Audit #2	Audit #3
1. Date of audit	5/13/2021	5/13/2021	5/13/2021
2. Cylinder ID number	BLM005117	BAL5136	CC443265
Vendor	Airgas	Air Liquide	Airgas
3. Date of certification	5/22/2020	8/30/2020	5/13/2020
Expiration date	5/22/2028	8/30/2024	5/13/2028
4. Type of certification	RATA Class	RATA Class	RATA Class
5. Certified audit value	5.55	11	18.03
6. CEMS response values	5.58	11.16	18.26
	5.59	11.17	18.27
	5.59	11.17	18.27
Average:	5.59	11.17	18.27
7. Accuracy	0.72%	1.55%	1.33%

B. Cylinder gas audit (CGA) for NO_x (ppm):

	NO _x			
	Audit #1	Audit #2	Audit #3	
1. Date of audit	5/13/2021	5/13/2021	5/13/2021	
2. Cylinder ID number	BAL5293	XL000366B	ALM029205	
Vendor	Air Liquide	Airgas	Airgas	
3. Date of certification	11/2/2018	11/21/2017	2/3/2020	
Expiration date	11/2/2021	11/21/2025	2/3/2028	
4. Type of certification	RATA Class	RATA Class	RATA Class	
5. Certified audit value	23.53	54.79	91	
6. CEMS response values	23.64	54.59	90.90	
	23.83	54.63	90.65	
	23.84	54.97	90.20	
Average:	23.77	54.73	90.58	
7. Accuracy	1.02%	-0.11%	-0.46%	

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
- 2. Corrective action taken:
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report–FCC/CO Boiler SO₂/NO_x/CO/O₂ CEMS

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P007

O ₂ CEMS Manufacturer: ABB		Model #: Magnos 10	_	MS Serial # 3.340569.7
SO ₂ CEMS Manufacture ABB	r:	Model #: Limas 11 U		MS Serial # 3.340641.7
NO _x CEMS Manufacture	r:	Model #:		MS Serial #
ABB		Limas 11 U	JV	3.340641.7
CO CEMS Manufacturer:		Model #:		MS Serial #
ABB Automation		URAS- 26		3.347698.3
CEMS sampling location: CO Boiler stack				
CEMS span values as per the applicable regulation:				
SO ₂	400 PPM		O ₂	10.0 %
NO _x	350 PPM		СО	1000 PPM

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for SO₂ (SO₂ lbs/1,000 lbs Fresh Feed):

		SO ₂
1.	Date of audit:	5/20/2021
2.	Reference method (RM) used:	Method 6C
3.	Average RM value:	0.10
4.	Average CEMS value:	0.12
5.	Absolute value of mean difference:	0.02
6.	Confidence coefficient:	0.000
7.	Percent relative accuracy	2 17
	(based on applicable standard):	2.17

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for NO_x (ppmv db):

		NO _x
1.	Date of audit:	5/20/2021
2.	Reference method (RM) used:	Method 7E
3.	Average RM value:	47.86
4.	Average CEMS value:	41.67
5.	Absolute value of mean difference:	6.19
6.	Confidence coefficient:	0.845
7.	Percent relative accuracy	3.52
	(based on applicable standard):	3.32

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for CO (ppmv db):

		СО
1.	Date of audit:	5/20/2021
2.	Reference method (RM) used:	Method 10
3.	Average RM value:	1.41
4.	Average CEMS value:	4.33
5.	Absolute value of mean difference:	2.92
6.	Confidence coefficient:	0.125
7.	Percent relative accuracy	0.61
	(based on applicable standard):	0.01

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for O₂ (% by vol. db):

		O ₂
1.	Date of audit:	5/20/2021
2.	Reference method (RM) used:	Method 3A
3.	Average RM value:	4.32
4.	Average CEMS value:	4.38
5.	Absolute value of mean difference:	0.06
6.	Confidence coefficient:	0.027
7.	Percent relative accuracy:	1.99

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

- B. Cylinder gas audit (CGA): (Not Applicable this quarter)
- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - FCC Regen Line SO₂/NO_x/CO/O₂/CO₂ CEM

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P007

SO ₂ CEMS Manufacturer: ABB		Model #: Limas 11 UV	CE	MS Serial # 3.240685.3
NO _x CEMS Manufacturer: ABB		Model #: Limas 11 UV	CE	MS Serial # 3.240682.3
CO CEMS Manufacturer: ABB		Model #: URAS 14	CE	MS Serial # 3.240684.3
O ₂ CEMS Manufacturer:		Model #:	CE	MS Serial #
ABB		Magnos 206	Magnos 206 01400101195301	
CO ₂ CEMS Manufacturer: ABB		Model #: Limas 11 UV	CE	MS Serial # 3.240682.3
CEMS sampling location: FCC Regen Line stack				
CEMS span values as per the applicable regulation:				
SO ₂	SO₂ 500 PPM		2	25.0 %
NOx	200 PPM	C	0	1000 PPM
CO ₂	50.0 %			

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for SO₂ (ppmv db):

		Vivicom	PI
1.	Date of audit:	5/19/2021	5/19/2021
2.	Reference method (RM) used:	Method 6C	Method 6C
3.	Average RM value:	95.90	95.90
	Average CEMS value:	85.42	85.10
5.	Absolute value of mean difference:	10.48	10.80
6.	Confidence coefficient:	3.627	3.712
7.	Percent relative accuracy	14.71	15.13
	(based on applicable standard):	14.71	10.13

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for NO_x (ppmv db):

		Vivicom	PI
1.	Date of audit:	5/19/2021	5/19/2021
2.	Reference method (RM) used:	Method 7E	Method 7E
3.	Average RM value:	48.26	48.26
4.	Average CEMS value:	42.37	42.26
5.	Absolute value of mean difference:	5.89	6.0
6.	Confidence coefficient:	0.906	0.883
7.	Percent relative accuracy	14.08	14.26
	(based on applicable standard):	14.00	14.20

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for CO (ppmv db):

		Vivicom	PI
1.	Date of audit:	5/19/2021	5/19/2021
2.	Reference method (RM) used:	Method 10	Method 10
3.	Average RM value:	422.71	422.71
4.	Average CEMS value:	390.82	388.29
5.	Absolute value of mean difference:	31.89	34.42
6.	Confidence coefficient:	3.413	5.309
7.	Percent relative accuracy	8.35	9.4
	(based on applicable standard):	0.33	J.4

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for O₂ (% by vol. db):

		Vivicom	PI
1.	Date of audit:	5/19/2021	5/19/2021
2.	Reference method (RM) used:	Method 3A	Method 3A
3.	Average RM value:	1.99	1.94
4.	Average CEMS value:	2.24	2.16
5.	Absolute value of mean difference:	0.26	0.21
6.	Confidence coefficient:	0.041	0.026
7.	Percent relative accuracy:	14.89	12.17

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for CO₂ (% by vol. db):

		Vivicom	PI
1.	Date of audit:	5/19/2021	5/19/2021
2.	Reference method (RM) used:	Method 3A	Method 3A
3.	Average RM value:	16.30	16.30
4.	Average CEMS value:	16.32	16.30
5.	Absolute value of mean difference:	0.02	0.00
6.	Confidence coefficient:	0.064	0.077
7.	Percent relative accuracy:	0.53	0.47

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

B. Cylinder gas audit (CGA): (Not Applicable this quarter)

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
- 2. Corrective action taken:
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – Sulfur Recovery Unit (SRU #1) SO₂/O₂ CEM

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P009

SO ₂ CEMS Manufactur Ametek	er:	Model #: 919	9	CEMS S	erial #: ZB-919SP-10541-1
O ₂ CEMS Manufacture Ametek	r:	Model #: 919	9	CEMS Serial #: ZB-919SP-10541-1	
CEMS sampling location	n: SRU Therm	al Oxidizer			
CEMS span values as	per the applicat	ole regulatio	n:		
PPM Percent			<u>Percent</u>		
SO ₂	500		O ₂		10.0
NO _x			СО	2	

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for SO₂ (ppmv db):

		Vivicom	PI
1.	Date of audit:	5/28/2021	5/28/2021
2.	Reference method (RM) used:	Method 6C	Method 6C
3.	Average RM value:	103.77	103.77
4.	Average CEMS value:	83.65	83.18
5.	Absolute value of mean difference:	20.12	20.59
6.	Confidence coefficient:	2.546	2.474
7.	Percent relative accuracy	9.07	9.22
	(based on applicable standard):	9.01	9.22

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

Relative accuracy test audit (RATA) for O2 (% by vol. db):

		Vivicom	PI
1.	Date of audit:	5/28/2021	5/28/2021
2.	Reference method (RM) used:	Method 3A	Method 3A
3.	Average RM value:	4.65	4.65
4.	Average CEMS value:	4.64	4.64
5.	Absolute value of mean difference:	0.00	0.01
6.	Confidence coefficient:	0.029	0.038
7.	Percent relative accuracy		
	(based on applicable standard):	0.69	1.04

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

- B. Cylinder gas audit (CGA): (Not Applicable this quarter)
- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 1. Out-of-control periods.
 a. Dates:
 b. Number of days:
 2. Corrective action taken:
 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – Sulfur Recovery Unit #2 and #3 (TRP SRU) SO₂/O₂ CEM

Period ending date: June 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P037

SO ₂ CEMS Manufacturer: Ametek		Model #: 919		CEMS Serial #: ZX-919-1	
O ₂ CEMS Manufacturer: Ametek		Model #: 919		CEMS Serial #: ZX-919-10814-1	
CEMS sampling location	CEMS sampling location: TGT #2 Thermal Oxidizer stack				
CEMS span values as per the applicable regulation:					
	<u> </u>	<u>PPM</u>			<u>Percent</u>
SO ₂	500			O ₂	10.0
NO _x				CO ₂	

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for SO₂ (ppmv db):

		Vivicom	PI
1.	Date of audit:	5/26/2021	5/26/2021
2.	Reference method (RM) used:	Method 6C	Method 6C
3.	Average RM value:	53.39	53.39
4.	Average CEMS value:	43.22	43.16
5.	Absolute value of mean difference:	10.17	10.22
6.	Confidence coefficient:	0.627	0.624
7.	Percent relative accuracy	4.32	4.34
	(based on applicable standard):	4.32	4.04

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

A. Relative accuracy test audit (RATA) for O2 (% by vol. db):

		Vivicom	PI
1.	Date of audit:	5/26/2021	5/26/2021
2.	Reference method (RM) used:	Method 3A	Method 3A
3.	Average RM value:	5.37	5.37
4.	Average CEMS value:	5.20	5.19
5.	Absolute value of mean difference:	0.17	0.18
6.	Confidence coefficient:	0.082	0.084
7.	Percent relative accuracy		
	(based on applicable standard):	4.72	4.91

8. EPA performance audit results:	Point (1)	Point (2)
a. Audit lot number		
b Audit sample number		
c. Results		
d. Actual value* (mg/dsm³)		
e. Relative error*		

^{*}To be completed by the Agency

- B. Cylinder gas audit (CGA): (Not Applicable this quarter)
- **C. Relative accuracy audit (RAA) for:** (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - Out-of-control periods.
 a. Dates:

 - b. Number of days:
 2. Corrective action taken:
 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Table B1 - Calibration Drift Assessment; Out-of-Control Periods for Part 60

CEMS	Start Time	End Time	Hours	Corrective Action Taken
West Flare TS	4/3/2021 7:00	4/4/2021 9:00	26	Recalibrated and returned the analyzer to service.
West Flare TS	4/28/2021 7:00	4/29/2021 6:00	23	Recalibrated and returned the analyzer to service.
West Flare TS	4/29/2021 16:00	4/30/2021 11:00	19	Recalibrated and returned the analyzer to service.

Table B2 - Calibration Drift Assessment; Out-of-Control Periods for Part 63

CEMS	Start Time	End Time	Hours	Corrective Action Taken
SRU 1 SO2	5/10/2021 7:00	5/10/2021 8:00	1	Recalibrated and returned analyzer to service.
SRU 1 SO2	5/12/2021 7:00	5/12/2021 8:00	1	Recalibrated and returned analyzer to service.
SRU 1 SO2	5/17/2021 7:00	5/17/2021 9:00	2	Techs changed both lamps, optimized and set up analyzer. Recalibrated and returned the analyzer to service
SRU 1 SO2	5/26/2021 7:00	5/26/2021 8:00	1	Recalibrated and returned analyzer to service.
SRU 1 SO2	6/27/2021 7:00	6/27/2021 8:00	1	Recalibrated and returned analyzer to service.
#2 & #3 Sulfur Recovery Units / TRP SRU SO2	4/1/2021 7:00	4/1/2021 8:00	1	Recalibrated and returned analyzer to service.
#2 & #3 Sulfur Recovery Units / TRP SRU SO2	4/2/2021 7:00	4/2/2021 8:00	1	Recalibrated and returned analyzer to service.
#2 & #3 Sulfur Recovery Units / TRP SRU SO2	5/21/2021 7:00	5/21/2021 8:00	1	Recalibrated and returned analyzer to service.

Per 40 CFR Part 63.8(c)(7)(i), a CMS is out of control if the zero, mid-level, or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard. These instances are reported in Table B2 above.